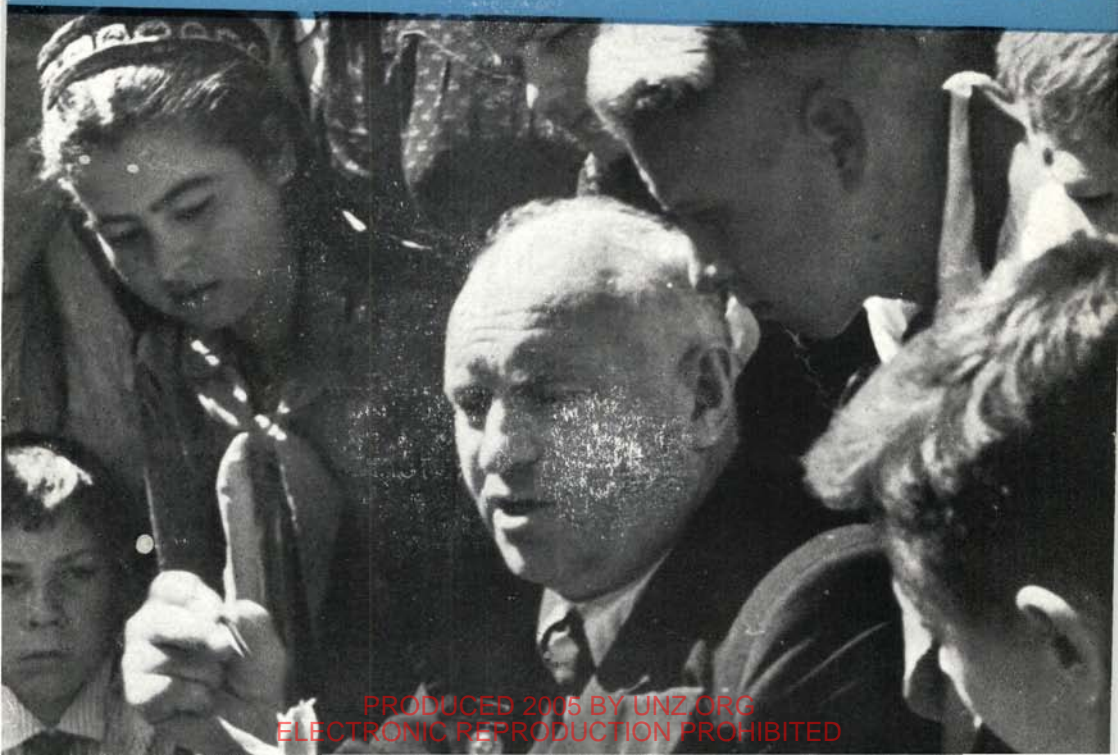


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THE SITUATION IN BIOLOGICAL SCIENCE

Proceedings of the Lenin Academy of Agricultural
Sciences of the U.S.S.R. Session : July 31—August
7, 1948. English translation of the Verbatim Report.
Foreign Languages Publishing House, Moscow, 1949.
pp. 631.

Price 9s. 6d. plus 1s. postage

From

S.C.R. SCIENCE SECTION, 14, KENSINGTON SQUARE,
LONDON, W.8.

SOVIET WEEKLY

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THE ANGLO-SOVIET JOURNAL

The Quarterly Organ of

The Society for Cultural Relations between the Peoples of the British Commonwealth of Nations and the Union of Soviet Socialist Republics.

The Society is a non-political organisation, founded in 1924, to diffuse information in both countries on developments in science, education, philosophy, art, literature, and social and economic life. It organises lectures, concerts, film shows, exhibitions, &c., and has the largest collection in Britain of information on cultural aspects of the U.S.S.R. Its library contains volumes in English and Russian, and members are entitled to take out books on loan, as well as to obtain reduced admission to many of the Society's functions and a reduced subscription to *The Anglo-Soviet Journal*. The minimum subscription is 5s. per annum.

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TWENTY FIVE YEARS OLD

By D. N. Pritt, K.C., M.P.

Chairman of the Executive Committee of the S.C.R. since 1936

THE Society for Cultural Relations between the Peoples of the British Commonwealth and of the U.S.S.R., to give it its full present title, was twenty-five years old on July 9th, 1949. In its quarter century of life, it and the world around it have had many and varied experiences—including constant fluctuations in Anglo-Soviet relations; war with its doubts, anxieties, delays, and victories, and peace with its high hopes and a measure of disappointment. Through light and darkness the Society has held on its way, and it seems likely to have many more years of useful work before it.

The Society was formally established on July 9th, 1924, at a meeting held in the Caxton Hall, Westminster, when the following objects were adopted:—

1. To collect and diffuse information in both countries on developments in Science, Education, Philosophy, Art, Literature and Social and Economic Life.
2. To organise lectures and an interchange of lecturers, conferences, exhibitions, &c., and to arrange for the publication and translation of papers and books.
3. To provide opportunities for social intercourse.
4. To take any action deemed desirable to forward the intellectual and technical progress of both peoples.

Whilst this is not the place for a detailed history of the Society I would like to mention some of the far-sighted and courageous men and women who took part in founding the Society. The first President was Professor L. T. Hobhouse, the first Vice-Presidents included Professor Lascelles Abercrombie, Mr. J. M. (later Lord) Keynes, Mr. H. G. Wells, and Mrs. Virginia Woolf, and the first Chairman of the Executive Committee was Miss Margaret Llewelyn Davies.

The Society was founded not just to take part generally in the work of cultivating friendship and understanding between two great groups of peoples, but to cultivate that friendship and understanding by encouraging communication and association between professional people in Britain and the U.S.S.R. Our view is that specialists

in a given field are able to bring real and full appreciation to the problems of specialists in their own field in another country; and it is a short step from this appreciation to a full and general understanding of, and interest in, the people of the other country. Through bringing professional people in many fields in the two countries together in this way, we have been able to do something to destroy the legend of the "iron curtain," a legend which was just as prevalent when the Society was founded in 1924 as it is to-day.

One of the earliest acts of the Society was to form a number of Sections through which specialists in either country could exchange views and information. The first, the Education Section, was set up in 1926. These sections form a very valuable part of our organisation to-day. They have not only been of value to the specialists themselves, but have provided the machinery through which non-specialists have been able to learn what is going on in those fields. I need only mention the many lectures in which scientists, educationists, architects and others have interpreted the work of their Soviet colleagues to British audiences; the way in which members of the Theatre Section have brought the Soviet stage to life for us; and the many occasions on which we have made available Soviet music or films or works of art.

We may take pride generally in the opportunities we have provided for people in Britain to see and hear examples of the arts in the U.S.S.R. and which without the existence of the S.C.R. would have been inaccessible. The Exhibition of Palekh Art in 1933, the visit of a group of dancers to the International Folk Dance Festival in 1936 and the Exhibition of Soviet Folk Art and Handicrafts in 1939, are among pre-war instances of what the initiative of a small but vigorous society could accomplish. During and since the war there have been many more examples. Most of them will be fresh in the memory of members, but I should like to recall the Film Festival of Soviet Art in 1941, the exhibition of "Soviet Art in Wartime" which attracted 85,000 visitors during its London showing in 1943, the Soviet Theatre Exhibition shown at Dorland Hall in 1946 (followed by a two-years' tour of the British Isles), and the Soviet Architecture exhibition of 1948, which is still arousing interest all over the country.

The very first exhibition of considerable size, was the Exhibition of Soviet Education in 1932, held in the London University Union hall. It drew thousands of visitors, from

Cabinet Ministers down to school children, and was the cause of heated correspondence and articles in the Press.

WE have also been fortunate all our life in being able to welcome distinguished Soviet visitors and introduce them both to our members and to wider audiences. To quote only a few, we entertained the late S. M. Eisenstein in 1930, Mr. Mikhail Sholokhov in 1935, Professor Otto Schmidt of Arctic fame in 1936, the late Alexei Tolstoy in 1937, and Mr. Sergei Prokofiev in 1938.

Some of our happiest memories are associated with the visit of a group of Soviet writers, including Mr. Alexander Fadeyev and Mr. Konstantin Simonov, who came over with the Soviet Parliamentary Delegation at the invitation of the Speaker of the House of Commons in 1946; the visit of the Soviet Chess team in 1947; and the visit of Mrs. N. V. Parfenova with the delegation to the N.U.T. in 1949.

Our relations with our generous friends and colleagues, V.O.K.S. (the Soviet Union's Society for Cultural Relations with Foreign Countries) who will celebrate their own twenty-fifth anniversary next year, form so large a part of our useful life that I want to acknowledge here the great help that they have given us through the years in the supply of material of all kinds, and in looking after the many parties of specialists and individual travellers who visited the U.S.S.R. before the war under our auspices, and were enabled by V.O.K.S. to see whatever was of greatest interest to them. No one could hope more devoutly than the S.C.R. that the time will shortly come when problems of visas and hard-and-soft-currency areas will be overcome, and many more of our members will have the same inspiring opportunity of seeing their colleagues at work as has already been afforded to a fortunate few of us.

It is, of course, always an important part of the work of the S.C.R. to respond to the requests of V.O.K.S. for material and information from this country. We do this work with particular pleasure, if on a much more restricted scale than we would like, and we are always gratified to know of the excellent use to which they put whatever we are able to send them, whether it is selections of books for the use of students or for discussion by their Writers' Section, plans and photographs of contemporary British domestic architecture, or exhibitions such as that of Shakespeare's England, which I had the pleasure of seeing after its Moscow run, in Yerevan, the capital of Soviet Armenia.

The S.C.R. may fairly claim that its influence and work extends far beyond its 2,000 or so individual members and the many thousand members of affiliated or-

ganisations. I think that its strength has always lain in its provision of a centre where those who genuinely want to do so can ascertain facts about the U.S.S.R.—facts which may not necessarily be palatable to the inquirer or favourable to the U.S.S.R., but nevertheless have to be accepted as facts. I think here particularly of our Library, which, built up during these twenty-five years and now staffed by three Russian-speaking librarians, has proved one of the most valuable centres of information on the U.S.S.R. in the country. It is used by research workers, Government departments, learned societies, and other libraries; and the help of our librarians, either by personal consultation or by the preparation of reading lists and translated abstracts, has made it an indispensable tool in any genuine study of the U.S.S.R. The same may be said of the work of the Exhibition Department in the field of visual aids, which have helped countless teachers, teachers in training, and schoolchildren.

In estimating the influence of the S.C.R., it would be fascinating to chart in graph form the curve of its membership and of the inquiries it receives against the curve representing popular opinion on the U.S.S.R. as manufactured by the great organs of propaganda. While the second curve might show frequent and wide fluctuations, the curve of S.C.R. progress would rise steadily; and I believe that the fluctuations in the curve of public opinion would have been even greater had they not been ironed out a little by the work of the Society in helping so many of the more thoughtful of our fellow citizens to obtain a balanced and sane view of those whom, I am convinced, the majority of our fellow citizens will once more soon call "our heroic allies"—allies this time in the task of building a peaceful and prosperous world.

There have of course been periods (not least in 1924 and 1949) when it has needed social courage and conscience of a high order to be associated in any way with the cause of friendship with the U.S.S.R. I am proud to recall and to record both the staunchness and adherence to principle which many outstanding men and women in the arts, sciences and professions—peculiarly vulnerable because of their eminence, to malicious criticism—have displayed in these periods. I am equally proud to recall the loyal support of the rank and file members who have maintained their support in difficult times, and have proved that honesty and the desire for truth are very much alive among the British people, and not least among the professional classes from whom our membership is in the main drawn.

Those who have been associated with the S.C.R. through the years of its work, in sunshine and storm, may feel proud of themselves. They have done much, even if more remains to be done; and all they have done has been—and is—in the service of peace.

IVAN PETROVICH PAVLOV

1849—1936

By G. V. Anrep, F.R.S.

(Extracts reprinted from "Obituary Notices" of the Royal Society of London, No. 5. Vol. 2, 1936, by courtesy of the Royal Society)

This year the Soviet Union has been holding celebrations of the birth of that great physiologist I. P. Pavlov who made fundamental advances in neuro-physiology and opened the way to a completely new conception of psychology and psychiatry. The articles on Pavlov in this issue of the journal are one of the several forms of celebration arranged by the S.C.R. Pavlov Centenary Celebrations Committee.

WITH the death of Ivan Petrovich Pavlov on February 27th, 1936, in his 86th year, there passed away one of the greatest physiologists of the last and present century. Pavlov was possibly also the most popular and the best known man in the physiological world.

The immense prestige which he had and the esteem in which he was held by his contemporaries can only partly be explained by his outstanding scientific achievements; to a large extent they were also due to his remarkably attractive and arresting personality. His impulsive straightforward, on the whole rather simple, joyous, and kind attitude to everybody round him evoked a feeling of warm affection and admiration in all who knew him.

Coming from far distant Russia, during his long and active life—Pavlov was born on September 27, 1849—he reached a position in Science which was unique, almost legendary. In order to understand Pavlov he must be described both as a scientist and as a man. Pavlov, the eldest son of a poor priest, was born in Central Russia in the rather out-of-the-way district town of Ryazan . . . Strong in health, exuberant in energy, Pavlov's chief characteristics were an extraordinary sense of duty and a tenacity in everything that he undertook. His expressions and opinions about things and people were always definite and seldom changed. On the whole, he was frequently intolerant and always extremely exacting in relation to others and even more so to himself. He had the greatest contempt for anything bordering on slackness or

negligence and did not spare the feelings of people in telling them so; but none of his pupils and co-workers ever could take offence because of the example which Pavlov himself set them by his great sincerity, and because he never bore a grudge against anybody for long. He would be in a blazing fury to-day, to-morrow he would forget all about it and would be genuinely hurt if one reminded him of it. "A good flare-up never harmed honest work" he would say, using a Russian proverb, and proceed as if nothing had happened.

The first years of Pavlov's life seem to have proceeded entirely in a sphere of purely physical development. As a boy he took an enthusiastic and frequently leading part in the primitive games and skirmishes of the village children. Again, while others seemed to be playing anyhow, just for fun, Pavlov showed even in games his usual tenacity. He constantly tried to improve himself in whatever he tackled. Left-handed like his father, by persistent practice he succeeded in becoming ambidexterous. It was a hard task to assist Pavlov during an operation. One never knew which hand he would use next. He made sutures with the right and the left hand with such rapidity that two men were required to supply him with threaded needles.

The delight in physical achievement and exercise remained with Pavlov to the end of his life. Up to his latest years he would frequently organize various physical competitions and even play in the yard of his Institute some vigorous game. A photograph exists showing Pavlov, at the age of 75, with a number of his colleagues, armed with Russian baseball clubs. He organized a gymnastic society among the medical staff of his Institute. Such was his enthusiasm that even the rather sedate temperament of the average Russian intellectual was overcome. Pavlov always used to say that he appreciated the feeling of "physical

satisfaction" more acutely than that of "mental satisfaction"—"muscular joy" he would call it.

Pavlov did not distinguish himself in any way during his school career in the preliminary and then secondary theological seminary. He liked taking part in debates and discussions upon various problems. Whenever Pavlov was present the discussion at once became extremely stormy; his enthusiasm and logical thinking always carried the audience. Tenacity was again his main trait. I remember, when I was a second year student, that somehow or other a discussion arose in Pavlov's laboratory in respect of the comparative values of different fine arts; as to which of them is a sign of greater superiority of racial development. Pavlov was for painting and sculpture, I and some others were for music. No one would give way. We dug in encyclopaedias and books to find support for our respective points of view; each side was persistent to the extreme. How persistent can be seen from the fact that the discussion started in Russia in 1913 reached its height in 1927 while Pavlov was staying in Cambridge.

In 1870, Pavlov entered the Faculty of Science of the University of St. Petersburg. During the first years at the University he did not show any special brilliance as a scholar, and only in the third year of his studies, chiefly due to the influence of Zion (Cyon) who was Professor of Physiology, did Pavlov definitely settle on this subject and took it up with his usual unbounded enthusiasm. . . . The first research ever made by Pavlov was suggested to him by Zion over 60 years ago; the problem was to study the secretory innervation of the pancreatic gland. This investigation, which has never been published, was awarded the Gold Medal of the University. Pavlov was taken by research in earnest; from now on he considered it above everything in life. . . .

In 1875, Zion was elected to the Chair of Physiology at the Medical Academy and offered the newly graduated Pavlov the post of assistant, which he gladly accepted.

An unfortunate event occurred at that time. The election of Zion to the Medical Academy, which was made on the recommendation of such men as Ludwig, Pflüger, Helmholtz, and Claude Bernard, was revoked by the Government, the reason being that Zion was of Jewish extraction. The incident with Zion was coupled with considerable and rather degrading intrigues against him amongst students as well as teachers. Zion, one of the greatest of Russian physiologists, had to leave Russia for good. Pavlov resigned forthwith and declined to be an assistant to Zion's successor, a pompous scientific nonentity. It was typical of Pavlov to have taken such an uncompromising attitude from which no material interest could move him. In later years, when lecturing on the depressor nerve, Pavlov would never fail to describe to the students details of Zion's dismissal. He would pour furious scorn on administrative interference with matters of science.

On the whole intolerant in minor matters of

everyday life, Pavlov was extremely broad-minded in matters of higher importance.

AFTER some time Pavlov succeeded in obtaining a post of Assistant at the Veterinary Institute, which he held for two years. In the summer of 1877 he collected sufficient funds to visit the famous Physiological Laboratory of Heidenhain in Germany. Heidenhain worked at that time almost entirely on digestive problems.

First directed into these lines of investigation by Zion and now by Heidenhain, half of Pavlov's life became devoted to the study of digestion.

Pavlov obtained his medical qualification in 1879 with a delay of one year on account of the Russo-Turkish war. His research work and general abilities were greatly appreciated. He was awarded a Gold Medal of the Academy and a research Scholarship. Being true to his principles, he still declined, after the incident with Zion, to join the Physiological Laboratory in the Medical Academy; instead, he was placed in charge of an experimental laboratory, which an enlightened Professor of Medicine in the Academy, S. P. Botkin, had created next to his clinic. Such a laboratory was considered at that time an almost unheard-of novelty. The problems to be worked upon were usually selected by Botkin; Pavlov had to see to their execution. Pavlov could conduct a large number of investigations at the same time with the greatest ease. He could in a moment switch off his mind from one problem to another. He would remember every detail of previous experiments, and in every case without the slightest confusion, would pick up the threads of reasoning, exactly where he had left them. In Botkin's laboratory he had to deal possibly with not more than five or six scientific problems at the same time, but at the height of his career, during his work on conditioned reflexes, he had sometimes over 60 people at work, everyone on a different problem. He directed three laboratories, and so far as I remember Pavlov was never at a loss as regards even the slightest details of each individual problem.

Pavlov married in 1881. His wife came also from a family of a priest. Three years later he obtained the M.D. degree and the title of Privat Dozent of the Academy. He was also given two years' leave for scientific work abroad which he spent in the laboratories of Heidenhain and Ludwig. These two great physiologists must be considered as his immediate teachers. In discussing them Pavlov would frequently say that he took Heidenhain as an example of passionate devotion and enthusiasm to science and Ludwig as an example of restrained precision in observation—two main attributes which Pavlov considered as essential for a successful study of nature.

On his return from abroad to his old post in the Medical Academy, Pavlov gave him-

self up with complete abandonment to scientific research. Nothing could deviate him from his work; in fact, he even transformed a part of his modest apartment into a laboratory. He took some of his operated animals home, where together with his wife he would nurse them day and night. At first, circulation as a result of Ludwig's influence, and then more and more the physiology of digestion as a result of the early influence of Zion, and later of Heidenhain, took up his attention.

Although already extremely successful as an investigator, Pavlov had several disappointments in his early professional career . . . Finally, he was almost simultaneously elected to the Chair of Pharmacology at the University of Tomsk, to a Chair at the University of Warsaw, and to a Chair of Pharmacology at his own Medical Academy. He accepted the latter and was appointed. He held this post for almost five years, until 1895, when he was finally transferred to the Chair of Physiology. In 1889, at the instigation and to a large extent at the cost of one of the Royal Princes, an Institute of Experimental Medicine was built. Amongst its several laboratories was one especially devoted to Physiology . . . Pavlov did not care what sort of accommodation he got except that everything should be done with the utmost speed and that the laboratory should have a first-class aseptic department. While new laboratories were built for other subjects, Physiology had to be placed in an old building. Pavlov did not mind this at all so long as he could start work at once; in fact, he was always sceptical about the modern tendency to build palaces for scientific laboratories. "Gilded uniforms never won a battle," he would say. He considered that a certain degree of discomfort is good for a fertile mind and that a shortage in apparatus and material trains resourcefulness. In 1891 Pavlov took charge of the new department. This gave him at last considerable facilities for research, and also improved the purely material side of his life.

During his medical studies as a student Pavlov had always been more interested in Surgery than in Medicine; this interest left a deep impression in all his subsequent studies. It was the realisation of the great importance that Surgery was designed to play in experimental research which made Pavlov insist that a proper operation theatre and hospital should be built in the Physiological Institute.

Generally speaking, it was always the immediate, the mechanical, the perfectly obvious which appealed to Pavlov most. For instance, Pavlov never knew and rather mistrusted chemistry to the end of his life.

It is remarkable that Pavlov, a man of such tremendous vitality and impulsiveness, was nevertheless extraordinarily regular in the distribution of his time. Punctual to the minute—he was never known to be late for a lecture—his operations, experiments, and all his laboratory work was carried on exactly to time. A fury of indignation was poured on the slacker, no excuse would

be accepted. Regular in his work he was as regular outside it. Exactly at a definite moment he would disappear to his private room where he would brew tea for himself in a chemical flask. Punctually every day he would end his labour, more frequently than not walk at a sharp pace a couple of miles to his house, dine with his family, and after infinite glasses of tea he would rest for an hour or two, waking up later in the evening to work alone, undisturbed in his study. To everything that he did he gave himself completely without reservation. In work, in leisure, in passing judgment upon people and their achievements, he never had a middle course or an intermediate shade of opinion.

DURING the summer holidays, which up to the revolutionary period he spent in Esthonia, Pavlov would have nothing to do with Physiology. I remember one occasion when as a young man driven to desperation by some intricate experiments on conditioned reflexes I decided to go and see Pavlov in the country.

I stayed with him for two days. Pavlov was glad to see me. He showed me his flowers, made me dig in the garden and carry water, made me weigh cucumbers which were artificially supplied by him with various sugars and grown upon different manures. We bathed in the sea and talked about everything on earth, but I never was given the chance even to mention my problem. Everything with Pavlov was complete, full out in work, full out in rest. He would frequently say that a perfect machine should be able to reach within the shortest time a state of maximal activity as well as an immediate and complete state of inhibition or rest. The stronger the engine the stronger and more immediate should be the brakes. This peculiarity was in him paramount. With the greatest facility he could deliberately and suddenly change from one line of thinking or from one activity to another. He could deliberately shut his eyes to disturbing and unpleasant factors although a moment ago they might have gripped him very deeply. He never forgot them and kept on returning to them until he would finally conquer or solve them, but meanwhile he could set his brain free and devote himself to other interests. These interests outside his work were extremely varied. He was always on the look-out for joy and he derived it from hundreds of sources. Books, especially historical books, gardening, collecting almost anything from butterflies and stamps to good paintings, could at any time completely absorb his attention. This spiritual as well as physical freshness he kept to the end; it is enough to mention that in 1918, at the age of 69, during the time of the revolutionary period when food was so scarce, Pavlov would regularly ride for several miles on his bicycle to work in a vegetable garden. As regards his instinct

for collecting, Pavlov used to say that it should be strongly developed in every scientific worker. After all, what else is our work but a constant collecting of new facts and the systematizing of old ones? During the summer vacation he was simply in need of satisfying this instinct by other means, and as in everything else he would do so with enthusiasm. It was curious to watch old Pavlov creep on tip-toe towards some butterfly, whispering endearing terms and imploring it not to move until he got it. He was genuinely miserable if he failed and for days he would tell everybody about his bad luck.

As head of a laboratory, Pavlov was always extremely stimulating. He knew how to raise the interest of his co-workers even when the work itself was tedious and dull. It should be remembered in this connection that the preparatory stage in the work on conditioned reflexes sometimes extends over many months before the first experiment can be attempted. At the time when Pavlov was chiefly engaged in the study of digestion he would take an active part in the experiments himself. Most of the vivisection experiments were performed personally by him. In experiments on aseptically operated animals which were subjected to long periods of observation Pavlov would have his co-workers watch the animals, himself dropping into their rooms to see the results and to discuss future work. As a man who was permeated with an impatient desire to have quick results, Pavlov simply could not bring himself to watch or carry on any procedure lasting a long time without any apparent results. He was patient enough to accumulate very gradually the results of observations made by his co-workers, but himself he needed action. Possibly this explains the curious fact that Pavlov, from whose laboratories several hundreds of publications on conditioned reflexes were made, never worked on conditioned reflexes himself. In fact, I believe that he never even attempted to establish a conditioned reflex in a dog.

In discussing the results of an experiment with his co-workers as well as during his lectures to the students Pavlov knew how to present most intricate facts in an extraordinarily lucid and interesting form. Whatever he discussed he would completely dominate the attention of the audience. His lectures did not sound like proper lectures at all, they were rather more like discussions about what he himself thought upon the subject. Pavlov very rarely made reference to physiological literature, partly on account of the fact that he was a bad linguist, partly because, having to a large extent himself created the subjects of the physiology of digestion and of conditioned reflexes, he had no need to refer to other literature than that which came out of his own laboratories.

He never employed mathematics even in its elementary form. He frequently said that mathematics is all very well but it confuses clear thinking almost to the same extent as statistics; besides, mathematically

inclined physiologists usually glory in abstruse equations and figures chiefly because of an inability to express things in a simple way. Theoretical interpretations in general had very little value for Pavlov; "use facts and do not theorize" was his constant saying.

Pavlov in his own discussions on research frequently expressed the opinion that the mind of an investigator must always strive to answer the two major questions of "what?" and of "how?" Jokingly he would even classify contemporary physiologists into "what-minds" and "how-minds." The realization of this division, said Pavlov, helped him to become both and, in fact, he was as great in discovering new phenomena which he approached from the point of view of what happens when an organism is placed under definite strictly controlled conditions as he was when he would analyse the mechanism of a phenomenon and try to answer the question as to how it happens. This attitude helped him to realise that in every biological process, just as in every physical phenomenon, things may proceed quite differently depending on the conditions under which the observation is made. From his very early work the conditions of the experiments were meticulously controlled, registered, and tabulated.

It would be useless here to describe all that Pavlov did in the physiology of digestion; it is sufficient to say that digestive processes were only hazily understood before the advances made by Pavlov's school. Most of the facts relating to digestion, as it is now known, either had their origin, or were established, in Pavlov's laboratory. In 1897 a collected account of his work was brought out in German and in French. A little time later an English translation appeared from the German edition by Professor D. W. Thompson. In 1904 Pavlov was awarded the Nobel Prize for Medicine for his work on the physiology of digestion. By this time, however, Pavlov had practically given up a direct personal interest in digestion and had taken up the subject of conditioned reflexes.

At the age of 58, when Pavlov was already in the highest rank of physiologists and when, had he stopped work completely, he would still have remained one of the greatest scientists of his time, he gradually embarked on possibly a still greater scientific adventure.

The study of salivary glands led him to the investigation of what was then known as "psychical" secretion of digestive juices. This secretion he began to study with the same ultra-materialistic approach as any other activity of the organism. At first without any definite plan, treating this secretion more from the point of view of digestive utility, he gradually began to realise that it could be used as a new approach to the study of the highest functions of the

cerebral cortex. The salivary glands, instead of being of interest in themselves, now were used as an index of the complicated phenomena taking place in the brain. The appetite reactions which so interested him while working with sham-feeding, and which became so familiar to him during his digestive work, now were used as an objective sign of cortical reactions. These reactions he treated like any other reflexes, just as Sherrington did for the spinal cord and Magnus for the brain stem. The brain which even now to many has a sort of undefined, vitalistic, almost mystical aspect, was treated by Pavlov in the same manner as other organs of the body. In studying the activity of the cortex, Pavlov never pretended to become a psychologist, he remained a pure physiologist and rather scorned the attempts of psychology to intrude into the physiological aspects of brain activity. In fact, he says, "It is still open to discussion whether psychology is a natural science or whether it can be regarded as a science at all."

"Every material system can exist so long as its internal forces, attraction, cohesion, &c. . . . balance the external forces acting upon it. This is true for an ordinary stone just as much as for the most complex chemical substance, and its truth should also be recognised for the animal organism. Reflexes are the elemental units of this perpetual equilibration." These reflexes Pavlov soon realised were of two types. Reflexes which are constantly present under any conditions of the animal's existence—in Pavlov's terminology unconditioned reflexes—and reflexes which are acquired during the animal's individual existence, which are, so to speak, learnt and which are rigidly dependent on internal and external conditions—conditioned reflexes. In the higher animals these reflexes naturally assume the highest importance by determining the behaviour of an individual. The phenomena of education and the adjustment of the individual within the environment, in fact, his whole social existence, depend on these learnt or conditioned reflexes.

From about 1905 to the end of his life Pavlov devoted himself to the study of these reflexes. A new important chapter of Physiology had been created. The results obtained have to a large extent influenced and modified the old physiology of the brain, the physiology of the sense organs, and also the science of psychology and even psychiatry.

Problems of development of learnt reactions and of their disappearance, the interaction between various conditioned reflexes, their relation to unconditioned reflexes, physio-

logical processes underlying the phenomenon of discrimination of stimuli, the problems connected with the hypnotic state and sleep, the effect of various drugs on conditioned activity, localisation of functions in the cortex, the limits of discrimination of stimuli by different sense organs, the pathology of conditioned reflexes such as experimental neuro-psychoses and their treatment, all these aspects of cortical activity were subjected to detailed investigation. The results of this colossal work only gradually penetrated abroad from Russia. General reviews of the subject were given by Pavlov at the meetings of International Physiological Congresses . . . It was only after the translation of his two books on conditioned reflexes that the subject became generally known. To-day the method of conditioned reflexes has been recognised all over the world. Institutes have been built for the special purpose of continuing and expanding Pavlov's work.

Pavlov's long scientific career appears like that of two great minds, one growing out from the other; Pavlov, the father of modern knowledge of digestion, and Pavlov, the creator of a still greater branch of physiology, that of conditioned reflexes.

Pavlov was elected a Foreign Member of the Royal Society in 1907 and an Honorary Member of the Physiological Society in 1909. The Royal Society awarded him the Copley Medal for 1915. In 1928, when he visited this country for the Harvey Tercentenary celebrations, he gave a Croonian Lecture before the Royal Society on conditioned reflexes. At a dinner meeting of the Royal Society Club on that occasion Pavlov told his English friends that he had first been attracted to the study of physiology, even before the beginning of his University course, through reading a Russian translation of a book by an Englishman, George Henry Lewes, on the Physiology of Common Life. His last visit to this country, at the age of 85 and about seven months before he died, was in order to attend the International Neurological Congress in London where he spoke about neuroses and psychoses from the point of view of conditioned reflexes. A few weeks later he presided over the International Physiological Congress held in Russia, where he received for the last time in his life the enthusiastic and affectionate applause of physiologists from every civilised country. The aged Pavlov, still a romantic, now almost a legendary figure, still engagingly simple and boyishly humorous, a little impatient with this popularity, received his last ovation. Within a few months he died from pneumonia after a short attack of influenza.

I. P. PAVLOV AND THE RUSSIAN SCHOOL OF PHYSIOLOGY

By Academician L. A. Orbeli*

PAVLOV'S scientific personality took shape under the direct influence of his University tutor, Professor Zion, and the indirect influence of Sechenov. It was Zion that aroused his interest in the problems of the nervous-control of the circulation of the blood and made him the brilliant experimenter he was, while it was to Sechenov that he owed his natural science approach to mental activity in man and animals.

Upon these two influences was later superimposed that of the celebrated clinical worker Botkin, to whom Pavlov owed the practice of relating everything he discovered in his laboratory work to the aims of clinical medicine. This attitude was shown in his approach to the role of the nervous system in the development and course of morbid processes.

During his trips abroad Pavlov was able to satisfy his interest in certain special questions; he also enriched his knowledge and improved his technique at the laboratories of the two greatest authorities of his time, C. Ludwig and R. Heidenhain. He entered their laboratories an accomplished scientist of wide repute, a brilliant experimenter and surgeon, possessing a wealth of experimental data accumulated by himself.

The four main lines of research traceable throughout his subsequent work followed from his scientific training. While still an undergraduate at St. Petersburg University, Pavlov made two studies which formed the basis of his later researches and discoveries. Under the influence of Zion, who with Ludwig had discovered the depressor-nerve of the heart, Pavlov investigated the innervation of the heart and discovered the nerve-bundle which, in contra-distinction to the depressor-nerve, is responsible for the reflex acceleration of cardiac rhythm. Later, by analysing the respective roles of the various branches of the cardiac plexus, Pavlov was to distinguish the "rhythmic" and the "dynamic" among the efferent nerves of the heart.

Under the influence of Academician Ovsiannikov he began studying the secretory activity of the pancreas. In his exacting search for more perfect methods of experimental investigation he developed the method of a chronic fistula of the pancreatic duct, which was to be named after him and was later applied by his pupil Glinksky to the study of the salivary glands. This led

to his passionate interest in the study of the functioning of the alimentary canal and his endeavours to create new and better methods of isolating individual parts of it. This enthusiastic interest of his led both to the creation of the modern theory of the activity of the main glands and motor apparatus of the alimentary canal, and to the physiological surgery of the alimentary canal.

In studying the efferent nerves of the vascular system and analysing the work of the alimentary canal, two lines of researches implying a considerable use of pharmacological agents, Pavlov arrived at the idea of the "specific excitability" of both the mucous membrane of the alimentary canal and of the inner surface of the blood vessels. This idea is now fully supported by recent research (baro-, chemo- and thermo-receptors).

The role of the nervous system and of chemical agents in controlling the activity of the gastric glands and of the pancreas was the subject of prolonged discussion that led Pavlov to embark on a thorough analysis of the conditions in which this activity proceeds. As a result of painstaking analysis over many years, and in particular of the Bayliss-Starling discovery of secretin, Pavlov's thesis emerged interpreting the work of the digestive glands as "a synthesis of the nervous and humoral mechanisms."

THE study of the nitrogen balance in the salivary gland during secretion and at rest on the one hand, and of the mechanism of the efferent nerves of the heart on the other, led Pavlov to assume the existence of "trophic" nerves in addition to vaso-motor and functional nerves. Unlike the latter, trophic nerves do not arouse activity in organs and tissues, but determine extremely subtle interactions between the tissue elements and their surrounding medium, controlling their physico-chemical state and their functional properties.

Pavlov reinforced his views by numerous

* Abridged translation of the authors' paper at the 220th anniversary meeting of the Academy of Sciences. Yubileinaya Sessiya Akademii Nauk S.S.S.R., 15 iyanvar — 3 iyulya 1945 g. Tom I. Iz. 1948

observations, particularly of morbid and dystrophic processes induced by fatigue, the displacement of organs, or similar derangements induced by various operations inflicted on the alimentary canal. It should here be pointed out that Pavlov's views on the role and mechanism of the efferent nerves of the heart coincide almost exactly with those of the eminent British physiologist Gaskell, in spite of the fact that the two scientists though contemporaries were working quite independently of each other.

While studying the external secretion of the digestive glands, Pavlov discovered facts testifying to the strict determination of this secretion. When observing the activity of the salivary and gastric glands, two basic categories of facts were invariably distinguishable. On the one hand was the dependence of secretion on the direct influence of food or of rejected substances on the mucus of the alimentary canal. On the other hand was the possible appearance of secretion at the mere sight of food, in response to several stimuli barely coinciding with, or preceding, the act of eating. The latter category of facts was at first known as a manifestation of "psychical secretion"; it was soon interpreted by Pavlov, however, as a manifestation of an acquired "conditioned-reflex" activity.

Pavlov disclosed the mechanism of the formation of "conditioned reflexes," that is, the formation of new functional connections between the different parts of the central nervous system as a result of the simultaneous appearance of two or more foci of excitation. He interpreted "conditioned reflexes" as individually acquired superstructures upon the "unconditioned reflexes." He also demonstrated that side by side with the unrestricted formation of new conditioned reflexes there takes place a continual suppression of their manifestation. This is brought about by the development of special forms of "internal inhibition," which takes place whenever the coincidence in time of the excitation of two foci is disturbed. The four special forms of internal inhibition are: extinction, differentiation, conditioning, and retardation. The first causes temporary complete elimination of the conditioned connection. The second and third cause a more precise response by the animal to a limited number of stimuli, the third is effective only in strictly defined combinations. The fourth causes a more or less exact adaptation to the succession of interconnected stimuli. As a result of continual interaction between excitation and inhibition, complex dynamic mosaic functional structures are created in the cortex of the brain. These are constantly renewed under the influence of exteroceptive stimuli from outside and of intero- and proprioceptive stimuli from within the organism.

As a basis to the dynamics of the cortical processes, there become apparent, in addition to the permanent equilibrium between excitation and inhibition, or the predominance of one over the other, the phenomena of the irradiation and concentration of the two processes and, as a counterbalance to

these, the phenomena of simultaneous and successive induction. Conditioned-reflex activity is thus found to be based on the principle of temporary connections. As these temporary connections are made between the sensory and motor areas of the cortex, they are susceptible of objective investigation and permit of a purely physiological interpretation, irrespective of whether they have a subjectively-experienced component or not.

The same principle of temporary connections underlies the interrelations between the different sensory areas. In subjective experience it assumes the form of associations whose appearance and dynamics are based on and governed by the same patterns as have been found valid in the case of conditioned reflexes. We thus have Pavlov's justifiable claim to have created a "true physiology of the brain" which is to serve as the background against which the whole subjective world of man will in time be set forth. Thus was fulfilled Pavlov's promise to create an experimental "psychology and psychopathology of animals," a promise he made as early as 1903, at the Madrid International Medical Congress. The whole significance attached by Pavlov to this new branch of knowledge was not, however, confined solely to this problem. He stressed the importance of the conditioned reflexes as "signals," laying special emphasis on the fact that in man, as distinct from animals, there exists, in addition to a primary signal system making direct use of real objects and external phenomena, a secondary signal system making use of verbal symbols (both acoustic and optic), of those objects and phenomena. These symbols are themselves, in the course of an organism's individual life, formed and fixed in accordance with the principle of the formation of temporary connections.

Thus the most important form of an organism's individual adaptation to new conditions on the one hand, and the development and increasing complexity of social life and relations on the other hand, are both given a physiological foundation. It is essential to realise that Pavlov's doctrine of conditioned reflexes is based not so much on the study of already acquired reflexes formed naturally as a result of individual life-contacts, as on the training and remodeling of induced conditioned-reflexes arbitrarily created by the experimenter, who deliberately makes a definite stimulus coincide with an inherent unconditioned reflex or with a previously-acquired conditioned-reflex. Thus the experimenter is enabled to observe and investigate reflex action in process of formation and the emergence of an interrelation between it and other reflex actions.

PAVLOV'S doctrine of conditioned-reflexes thus affords us a clue to the formation of reflex action in general. It should also be mentioned that while studying the physiology of

higher nervous activity in animals Pavlov made many discoveries that testified to the fact that some common derangements of the central nervous system may perhaps arise as a result of conflicts between the processes of excitation and inhibition. These nervous states are physiological sleep, certain special intermittent hypnoid states, and finally obviously neurotic states the mechanism of whose formation closely approaches that of human neuroses.

By assessing the nervous systems of various individuals according to their indices of intensity in excitation and inhibition, of equilibrium and lability, Pavlov was able to establish his schedule of different types of nervous system, and thereby touch on the question of the hereditary nature of their peculiarities.

Scores of medical practitioners passed through Pavlov's laboratories. At first these were mainly physicians from Botkin's clinic, but later they came from even the remotest parts of the vast country. Having worked with Pavlov for one, two or three years, they spread his ideas all over the country and made his name known far and wide among the people.

In addition to this army of temporary co-workers, Pavlov gradually assembled a number of permanent colleagues, many of whom stayed with him from ten to forty years. They were united in their scientific aspirations and in their reverence for their teacher and the great work he was doing. They included men and women of varying talents, varying experience, trained under varying conditions and subject to varying scientific influences. Not all Pavlov's pupils assessed his scientific activities in the same way. They organised many new scientific centres, and after his death his scientific ideas were developed very broadly and multifariously. A number of important physiological schools came into being, all deriving from a single common source, the school of Pavlov.

In his early research, Pavlov regarded the circulation of the blood as a self-governed system using the intravascular reflexogenic zones with their specific receptors. This concept has recently been adopted by numerous scientists, and has found support and extension in the works of Chernigovsky, who discovered a number of reflexogenic zones, endowed with specific baro- and chemo-receptive excitability, in different parts of the circulatory system and internal organs. Problems of controlling vascular tone and the work of the heart were successfully developed by the school of A. I. Smirnov. In the school of Orbeli, these problems were viewed from the standpoint of evolutionary physiology. Jankovskaya established the time of the formation of pressor and depressor reflexes in embryonic and early post-natal life, Mikhaileva established

the time of fixation of the tone of the vagus and the sympathetic nerves. The mechanism of interaction between the central parts of the nervous system controlling the circulation has been elucidated—the dissociation of pressor and depressor reflexes in cases of intoxication (Brestkin) and the dissociation of sections of the nervous system at various levels (Durmishyan). A. A. Michelson, Zimkina and Saprokhin have demonstrated the control of the vascular reflexes by the cephalic end of the cervical sympathetic nerve and by the cerebellum.

Problems relating to the secretory and motor activities of the alimentary canal have been worked out in detail. Razenkov and his school have accumulated a vast amount of material concerning (1) the role of the chemical properties of the blood in controlling the work of the gastric glands; (2) the adaptation of glands to varying diets; (3) the restoration of the functioning of the gastric glands after varying injuries, particularly burns. Orbeli, Savich, Petrova—and especially Bykov—with their co-workers, have reviewed Pavlov's data on the working of the digestive glands of the dog, by their observations of wounded and diseased patients medically subjected to various operations on the alimentary canal. Their investigations have gone to confirm the applicability to man of all the basic premises of Pavlov's theory.

Folbort and Savich have developed a most excellent method of surgical intervention in the bile-ducts, which has made it possible to study bile formation and excretion simultaneously.

Pavlov's ideas as to the trophic action of the nervous system resulted in several different scientific trends. Speransky, with a host of pupils and followers, started working on the problem of the role of the nervous system in the genesis of various diseases and the course they take. This scientist accumulated a great deal of material of considerable value, detailed physiological analysis of which will take ten years or more. Even now, however, we may say with confidence that in cases both of infection and of intoxication, the nervous system does not behave as a mere passively-reacting tissue, but rather as an active organiser of the pathological process and of the organism's concomitant secondary reactions.

As a result of her systematic work on dogs kept under experiment from ten to fifteen years, Petrova has succeeded in demonstrating that the animals, when placed in strenuous working conditions as part of the conditioned-reflex training, are subject not only to certain functional disturbances of the nervous system but also to several trophic disorders, namely, falling hair, itching and eczema, pimples, lipomae, sphincter-contraction, abnormal segmentation of the alimentary canal, and ulceration of the mucous membranes. Moreover, in these dogs the period preceding the development of experimental cancer was considerably reduced. By partial extirpation of the cortex and the subcortical ganglia, the Tomsk school of physiologists (headed

by Popov and Bayandurov) succeeded in demonstrating the powerful trophic role of the corpus striatum, which strongly affects the metabolism and influences development in birds and mammals in the early post-natal period.

THE study of the trophic activity of the nervous system was developed along three lines by the Orbeli school. Investigations by Ginezinsky, Strelzov, Gershunin, and Khudorozheva showed that the sympathetic fibres affect the skeletal muscle, changing the threshold of excitability, reducing the duration of excitability, intensifying the resulting contractions, protracting the period of efficiency and restoring efficiency in case of fatigue.

In other words, they affect the main functional properties of the muscular tissues. It has further been established that this "adaptive influence" extends to the peripheral nerves also, to the receptors and to the whole central nervous system from the spinal cord to the cortex of the large hemispheres, and constitutes the basic all-round function of the sympathetic system (Tonkikh, Kunstman, Savich, and others). It has also been established that underlying these changes in functional properties ("adaptive influences"), is an influence exerted by the sympathetic system on the physical and chemical properties of the tissues, namely, on their electric conductivity (Lebedinsky, Alexanyan, Mikhaleva), on their elasticity and viscosity (Lebedinsky, Michelson), and on their metabolism (Orbeli, Jushchenko, Tonkikh, and others); this influence is trophic.

Researches by Orbeli's co-workers have also shown that a similar influence exists in the cerebellum, and in the course of these researches have been able to determine the role of the cerebellum as a general regulator and stabiliser not merely of the motor function but also of all the organism's sensory and vegetative functions.

Of all Pavlov's scientific ideas, however, the most influential in the development of Russian physiology has been his teaching on conditioned reflexes. While he was still alive, some of his pupils had spread his ideas far beyond the sphere of his laboratories and had begun work on certain special problems in higher nervous activity.

Anokhin in Moscow has developed a method of studying the higher nervous activity of the dog in a state of freedom under bilateral stimuli allowing of an arbitrary response; he has applied this method on a large scale.

Bykov in Leningrad, with a large number of co-workers, has carried the doctrine of interoceptors and proprioceptors much further. He has discovered satisfactory methods of stimulating each internal organ separately and has made good use of the conditioned-reflex technique to give objective demonstration of the effects obtained.

Kupalov and his co-workers have made a great contribution to the further advance of this doctrine by a thorough analysis of the dynamics of the cortical processes and by elucidating the formation-mechanism of "functional structures."

Folbort and his co-workers in Kharkov have developed Pavlov's theory on the exhaustion and restoration of the salivary gland at work and at rest respectively. The deductions from this theory have been extended to cover the central nervous system. The two lines of Pavlov's work thus link up into an integrated concept of the role of exhaustion and restoration in the activity of the nerve-centres.

It is, however, at the Pavlov Physiological Institute (of the U.S.S.R. Academy of Sciences), and at the Pavlov Institute of Evolutionary Physiology and Pathology of the Higher Nervous Activity (of the Academy of the Medical Sciences), that the largest-scale studies of higher nervous activity on Pavlov's principles are carried out.

IN order to form a correct idea of the functioning of the brain, Gershunin, Strogonov, Fedorov, Tonkikh and others carried out simultaneous investigations into higher nervous activity (by the conditioned-reflex method), into the physiology of the sense-organs, and into objective electrophysiological records of cortical activity.

Side by side with this, work is being done by Strogonov, Sosunzeva and Pavlov on developing the doctrine of the secondary signal system, the basis for which was laid down by Pavlov. This secondary signal system is of prime importance, being the distinguishing feature of the higher nervous activity in man.

Petrova, Pavlov's closest co-worker, who while he was alive collected abundant material on neurotic states induced in dogs by the functional overstraining of cortical processes, is continuing her work indefatigably. She has developed the theory and practice of experimental neuroses to a high degree of perfection.

At the Institute of Evolutionary Physiology and Pathology of Higher Nervous Activity (Koltushi), work is going on along a line marked out by Pavlov. Higher nervous activity is being studied from a genetic point of view with the purpose of determining the part played by heredity in the development of given nervous types in animals. Side by side with this, the evolutionary principle is also applied to the study of higher nervous activity. Starting from the idea that the process of forming conditioned reflexes and establishing an interaction between them and pre-existent reflexes, both inherent and acquired, may well provide a clue to the problem of the functional evolution of the nervous system, Orbeli and his co-workers began investigating the formation of inherent reflex activity in the foetal

and early post-natal period. Studies by Volokhov, Stoklich, Obrastova and Zobkhallo have supported the idea and made it possible to draw several consistent analogies between the two series of processes.

Vassiliev, and later Promptov, carried out investigations into the interaction between inherent and acquired reflexes in birds, especially the nidicolae. Their studies have made a great contribution to the present concept of the allegedly instinctive forms of behaviour in birds.

Special mention should here be made of the work of Hanike, who has developed a brilliant method of studying conditioned reflexes in mice, a method which guarantees absolute accuracy in experiment. All the techniques, whether of application, graduation and time-distribution of stimuli, or of recording the responses of the animals subjected to collective experiment, are automatic.

Vazuro, by analysing nervous activity in anthropoid apes (chimpanzees), was able on the basis of Pavlov's teaching to confirm the lack of any sound foundation to the psychological excursions of certain authors.

From experiments with animals there was accumulated a mass of material which forms a basis for attempts at objective investigation into the higher nervous activity in man. Brilliant studies by Krasnogorsky and Ivanov-Smolensky have demonstrated the applicability of Pavlov's method, with certain modifications, to the study of the higher nervous activity in infants. Ivanov-Smolensky has succeeded in demonstrating its applicability to the disintegrated nervous

systems of patients suffering from definite mental disorders.

Practical medicine will doubtless be greatly influenced by Pavlov's interpretation of the defensive role of inhibition and of sleep as a diffuse form of internal inhibition. Pavlov's views on this have been upheld by the successful use of sleep-therapy in treating schizophrenia (Ivanov-Smolensky), traumatic shock (Hassratian), trophic affections of the skin (Petrova) and burns or wounds (Poliakov). The concept of the plasticity of the nervous system, developed by Hassratian, is also likely to prove fruitful; this concept lays down that the large hemispheres play an important organising role in the compensatory phenomena of the central nervous system, a concept that will undoubtedly be of great value in developing new motor activity in invalids.

Few cases indeed may be cited in the history of science of an individual scientist having such a mighty influence on the development of science as had Pavlov. Not only in the choice of new methods of research, not only in the accumulation of a wealth of valuable and reliable factual material, in the profusion of his ideas and the novelty of his treatment of them, was his influence shown. It led also to the formation and training of a wide circle of pupils and co-workers, who are now proceeding successfully with the development of the various branches of his rich scientific legacy. It is no exaggeration to say that the modern Russian physiological school is at least to a high degree, if not entirely, the school of Pavlov.

THE INSTITUTE OF EVOLUTIONARY PHYSIOLOGY IN PAVLOVO

In the village of Pavlovo every corner is connected with the life of the brilliant physiologist Academician Ivan Pavlov, the creator of the theory of conditioned reflexes. Here stand the Institute of Evolutionary Physiology and Pathology of the Higher Nervous System, headed by Academician Leon Orbeli, and numerous scientific laboratories where the followers of the great physiologist work.

World science owes to Ivan Pavlov great discoveries which show with irrefutable accuracy how our sensations, feelings, thought and consciousness originate. Continuing Pavlov's research on the higher nervous activity, Leon Orbeli and other pupils of the great physiologist have obtained new data on the physiological life of animals and man which are of enormous scientific interest.

The physiologists are studying questions connected with the inheritance of typical features of the higher nervous activity, the

connection of conditioned reflexes with electrical phenomena in the cortex. The cerebral hemispheres of the brain are being studied from all aspects. The results of the research make it possible to reply to questions about certain diseases of the internal organs and the skin.

At present the scientists of the town are actively preparing to mark the rooth anniversary of Pavlov's birth, which falls in September of this year. For the anniversary an improved laboratory has been created for the study of the higher nervous activity of apes and monkeys; soon another laboratory equipped with the latest apparatus will be ready.

A general plan for the expansion of the scientific town has been worked out. The author of the plan is Academician Ivan Bepalov, who earlier built Koltushi, as it was then called, on the instructions of Pavlov himself. S.N. No. 2205.

THE INFLUENCE OF PAVLOV'S WORK ON PSYCHIATRY

By Brian H. Kirman, M.D., D.P.M.

PAVLOV'S genius has earned him an important place in the history of science. His contribution entitles him to rank with Darwin and with Newton. It is all the more surprising therefore that many people who have some slight acquaintance with his work should be in doubt as to the branch of science to which he devoted his long and fruitful life.

There are some who believe that Pavlov was a psychologist and even a few who are under the impression that he was first and foremost a psychiatrist. To some extent this confusion may be due to the fact that Pavlov was a Russian and worked all his life in Russia. Before the revolution scientists received little support in that country and it was only the persistence of Pavlov and the high merit of his work which enabled him to win recognition in his own country and to break through the barriers which separated scientific thought in Russia from that in Western Europe. Since the revolution the persistent barrage of anti-Soviet propaganda has raised a further barrier to the appreciation of the significance of Pavlov's work and its application to science outside of his own country.

In the main, however, the failure to understand that Pavlov consistently worked as a physiologist is due to other causes. At the time when Pavlov began his work psychology was still a branch of philosophy, and as such dominated by the idealist school of thought. This applied to a large extent to psychiatry as well, though at first glance the influence of the idealist approach may have been less obvious. For this reason, Pavlov, who throughout was a scientist, and adopted a materialist approach, rejected the methods of psychology and psychiatry as then practised, in his study of the central nervous system. He did not permit himself to engage in speculations as to whether the processes which he was studying were conscious or unconscious, voluntary or involuntary, and he eschewed any excursion into teleology. In making his observations he carefully chose a method which was as objective as possible and allowed of the minimum subjective misinterpretation, namely the measurement of the salivary secretion in response to a variety of stimuli. When in the course of his later work Pavlov made a frontal attack on various clinical problems he attempted to apply the same method, namely, a measurement of the alimentary secretions.

In order to appreciate the importance of Pavlov's work for psychiatry it is necessary

to know the state of psychiatric theory and practice when he commenced his studies of the conditioned reflex. Psychiatry was much influenced by the failure of psychology to keep pace with other branches of human knowledge in the transition from philosophy to science. In consequence it lagged a long way behind other branches of medicine and biology. This particularly applied to psychiatric theory. Even though practice was still largely influenced by strong religious and humanitarian movements which produced a series of reforms in the treatment of the mentally ill throughout the last century, the negative and fatalistic influence of idealist philosophy continually retarded progress.

In general biology the Weissmann-Mendel versus Lamarck controversy was in full blast, and whereas the outcome of this may have led to a one-sided concentration on certain aspects of heredity with neglect of the environmental factors, it did serve to concentrate attention on the *material* basis of heredity. In psychiatry on the other hand vague racial theories about the influence of "tainted stock" which in essence were similar to the Nazi race theories of a few decades later, were current. These theories muddled the influence of environment and heredity together in a very hazy way. In their earlier form they had a strong religious and moralistic flavour. It was assumed that there was some ideal, natural way of life laid down by the divinity, and that any deviation from this straight and narrow path was punishable by mental disorder in one of its many manifestations, and that this disorder was inheritable in accordance with the biblical text through a number of generations.

This view was later cloaked for those who preferred the semblance of scientific terminology by a reference to "injury to the germ plasm." The psychiatric writers of that time were very catholic in their view of what constituted mental illness and included under that head, not only the more common forms of insanity such as dementia praecox (now known as schizophrenia), melancholia, mania and paranoia, but also the various neuroses or lesser forms of mental disorder which are now usually classed as anxiety states, hysteria, obsessional states, &c. They also threw in conditions which are now recognised to have a physical basis in the form of a gross anatomical lesion such as general paralysis of the insane (syphilitic encephalitis), hemiplegia (stroke), senile dementia and cerebral arteriosclerosis (hardening of the arteries of the brain). Not content with this motley collection they pointed to the in-

cidence of mental deficiency, epilepsy, alcoholism, criminal tendencies (e.g., poaching a rabbit or stealing a pound of apples), and even to tuberculosis and poverty as clear evidence of a polluted stock naturally to be found among the lower orders of society. The case papers of many mental hospitals are still designed on the basis of this unitary theory of mental disorder and the evidence provided by them, although it ignores all the normal members of the family and is collected on second and third hand evidence as to previous generations, is often quoted as proof of "the hereditary nature of insanity."

THE widespread acceptance of such theories among psychiatrists led to a pessimistic outlook as to the possibilities of the treatment of mental disorder and to the continued isolation of this branch of medicine.

Against this background the sharp contrast of Pavlov's materialist and dynamic approach will be seen. It is true that other workers, notably Sherrington, devoted themselves to the study of related problems, using a physiological and scientific technique, but it was left to Pavlov to demonstrate the manner in which the simple reflex involved at the lower levels of the nervous system, which Sherrington studied, could be related to the complex processes involved in learning and in habit formation, i.e., to relate the primitive reflex arc passing through the spinal cord to the mass of potential or actual reflex arcs which involve passage through the brain.

It is true also that a number of psychiatrists, e.g., Janet and Freud, adopted a dynamic and dialectical approach to psychiatry, laying emphasis on the role of the environment in developing psychosis and more particularly neurosis, in the individual. Inasmuch as these workers failed to relate the theories which grew out of their work to the material basis of cerebral physiology which underlay the diseases they were studying, psycho-analysis, which was for a considerable time to occupy a dominant role in psychiatry, ultimately led backward rather than forward, imparting once again an element of mysticism rather than of science to the study of diseases of the mind.

The lead given by Pavlov to psychiatry—a lead which, it should be emphasised, has in the main not been followed—combines the revolutionary features of both Sherrington and Freud. His method was material like Sherrington's, and dialectical like Freud's. Pavlov produced in his experimental dogs by simple methods which could be repeated without difficulty by other workers, neuroses which were strictly comparable with those occurring in humans. He thus disposed incidentally of a widely held theory that mental disorder was a peculiar privilege of man. The difficulty about the work of Sherrington, and that which later gave rise to the development of experimental psychology was that, while providing much material of interest for physiology and neurology,

it had little direct bearing on psychiatry. This is not true of Pavlov's work, for it not only throws light on the normal processes of education (of great value to all concerned with mental hygiene), but it gives a clue to the development of the neuroses. It also provides a connecting link between various apparently unrelated phenomena in psychiatry, i.e., the beneficial action in certain cases of psychosis of continuous sleep therapy, of electrical convulsion therapy and of leucotomy.

Pavlov found that his dogs varied considerably in their characteristics and capacities. He devoted much time to the consideration of various types of dog and the evolution of a system of classification based on different reactions to the same situation, thus paralleling the work of Kretschmer in psychiatry. This was the least revolutionary and least constructive aspect of Pavlov's work. His main contribution was the demonstration of the shaping of character, including in special circumstances the development of neurosis, by the force of environment.

One of the simplest examples of experimental neurosis which Pavlov produced was that occasioned by presenting an animal with a problem too difficult for it to solve. Beginning with the simple reflex production of saliva in response to food he conditioned this to various secondary stimuli, i.e., as by showing the animal a circle before feeding. In this way the circle produced the same response as food. In the same way he was able to produce a negative or inhibitory effect by exhibiting repeatedly to the animal a different shape, e.g., a square and subsequently withholding food. A critical and distressing situation with many similarities to human neurosis could then be produced by the exhibition of a shape intermediate in form, e.g., an oval. A number of other aspects of Pavlov's work also have great significance for psychiatry, in particular, the development of paradoxical and ultraparadoxical states as he termed different types of reaction engendered by unfavourable circumstances. In the former the usual conditioned response to the appropriate stimulus acquires a negative instead of a positive value; e.g., the ringing of a bell which normally precedes the giving of food does not elicit salivation but causes a drying up of the mouth.

A similar condition in his patients is familiar enough to the clinician where the smell, sight and mere mention of preparation of food causes nausea instead of hunger. Such a state can be produced in the experimental animal by the association of the previously positively conditioned stimulus, with a harmful or unpleasant stimulus, e.g. an electric shock. In the ultraparadoxical state there is a complete reversal of a conditioned stimulus-response system, so that stimuli which previously gave a positive response now have a negative value and vice versa. This situation is also familiar to the psychiatrist in schizophrenic negativism. In this condition the patient behaves in a manner reminiscent of "Mary, Mary,

quite contrary" in the nursery rhyme. A meal nicely served is refused but a fragment of food which falls on the floor is avidly snatched and devoured. The behaviour in regard to excretion is similarly altered so that the victim of this malady stubbornly refuses to use a commode but as soon as he is removed from this, proceeds to urinate or defecate in the middle of his room, or generally in the most inappropriate spot.

PAVLOV demonstrated that human behaviour consists of an elaborate network of conditioned responses developed on the basis of a limited number of innate reflexes.

In this respect the conclusion for psychiatry bears a limited resemblance to that reached by Freud, i.e., that the psychology of consciousness is of less importance in mental disturbance than might seem to be the case at first sight. For Pavlov, however, there was no rigid compartmentalisation of the functions of the brain into egos, super-egos, ids, &c., and he traced the continuity of function right down from the most elaborate response pattern to the simplest reflex, e.g., the knee jerk.

The emphasis in Pavlov's work is upon temporary connections which are formed in the brain. All his results show that these connections are indeed temporary and as such liable to be changed by external factors. This fundamental principle provides at once a basis for understanding and a guide to the treatment of a number of psychiatric conditions. A new phase in Pavlov's work began when, as a result of accidental flooding of his laboratory he found that the series of systems of conditioned reflexes which had been built up over a considerable period in a number of dogs had been destroyed or altered. This situation is comparable to that in human battle neurosis met with during the two world wars, where the patient, having been exposed to severe psychological stress, becomes acutely mentally ill, suffering from acute anxiety state, hysteria or occasionally a short schizophrenic episode according to his constitution.

In other words the complex system of conditioned reflexes which goes to make up normal human behaviour is broken down and altered under such conditions. In these circumstances a normally welcome and anticipated stimulus such as the sounding of a dinner gong may produce an acute panic response similar to that produced by a trickle of water when seen by Pavlov's dogs, who had been saved from the flood. Applied to human experience Pavlov's

methods of rebuilding conditioned reflexes after they had been disturbed by emotional stress of this character, have yielded good results, even though their application outside the Soviet Union has been limited by lack of familiarity with, and by prejudice against, this approach.

In a number of other instances the temporary connections which are the basis of civilised, adult behaviour are disturbed. This happens, not only as a result of severe emotional stress as in "psychogenic" illness but also as a result of direct injury to the brain. The war on the Eastern front unfortunately provided Soviet psychiatrists with many thousands of such cases and in these too they found Pavlov's methods of great assistance in restoring normal function on the basis of re-education. Their results demonstrated the great adaptability of the human nervous system emphasising the possibilities of transfer of function from damaged to undamaged parts of the brain.

In a number of psychiatric conditions including both insanity and lesser mental disorders such as the obsessional type of neurosis, it appears that temporary connections of an undesirable nature are formed such as completely incapacitate the sufferer. It is only on the basis of some such explanation as this that we can reconcile the beneficial effects in some of these cases, of injury to the brain as a measure of treatment; e.g., by prolonged narcosis, electric shock, chemically induced epilepsy, insulin treatment or surgical intervention (leucotomy). Such treatment temporarily destroys the abnormal response patterns and allows of re-education on normal lines.

Pavlov's work did not end with his death. On the contrary the Soviet Government has made ample provision for the continuance of his work. Since the war this work has become increasingly integrated with Soviet psychiatry which is thus provided with a solid basis of dynamic neuro-physiology. Further acquaintance with the results of this school would be of great value for British and American psychiatry, major sections of which have until now disdained to make use of knowledge gained in the laboratory, seeking the answer to mental distress with Jung in a mystical psychological phylogeny (i.e., belief in a common or racial consciousness as exemplified in folk lore), or with Melanie Klein in psychological ontogeny i.e., belief in the importance for psychiatry of psychological changes before and during birth.) The trenchant logic of Pavlov can still do much to cut psychiatry free of this mumbo-jumbo and enable it to develop as a scientific branch of medicine.

BIBLIOGRAPHY

- Caudwell, C. 1947. *Studies in a Dying Culture*. Chapter VII. Freud. London.
 Frolov, Y. P. 1937. *Pavlov and His School*. London.
 Gordon, W. W. 1947. *Journal of Mental Science*. 94. 117.
 Kornilov, K. N. Smirnov, A. A. Tyeplov, B. M. 1948. *Psychologia*. Moscow.
 Pavlov, I. P. 1941. *Lectures on Conditioned Reflexes*. Vol. II. London.
 Sherrington, C. 1948. *The Integral Action of the Nervous System*. Cambridge.
 Trudi Instituta Imyeni I. P. Pavlova. 1947 1. Leningrad.
 Woodworth, R. S. 1946. *Contemporary Schools of Psychology*. Pp. 62-69. London.

PAVLOV TO THE KOMSOMOLS

A TESTAMENT FOR SCIENTISTS

*Text of a message sent by Pavlov to a meeting of the Young Communist League.
From the memoirs of Pavlov by his wife.**

WHAT would I wish the young people of my country who are dedicating their lives to science?

FIRST and foremost, perseverance. I shall never be able to speak of this essential condition for fruitful scientific work without emotion.

Peseverance, perseverance, and again perseverance. In your work, school yourselves right from the outset in the most determined perseverance in your accumulation of knowledge.

Study the fundamentals of any science before attempting to scale its heights. Never tackle the sequel without having absorbed the preamble. Never try to cover up gaps in your knowledge, even with the boldest conjectures or hypotheses. A soap-bubble may indeed delight your eye with its iridescence, yet it will inevitably burst, and nothing will remain to you save discomfiture. School yourselves in self-restraint and patience. Learn to do the drudgery of science. Study, compare, pile up facts.

However perfect the wing of a bird may be, it could never have lifted the creature up unsupported by the air. To the scientist, facts are the air. Without them you will never succeed in taking flight. Without facts, your "theories" are so much wasted effort.

But while studying, experimenting, observing, try to strike below the mere outer surface of the facts. Do not turn yourselves into pettifogging archivists. Strive to penetrate the mystery at the root of the facts. Seek out indefatigably the laws that govern them.

SECOND, modesty. Never imagine you know everything. And however high in esteem you may be, always be brave enough to tell yourselves how little you know.

Do not let yourselves be ruled by pride. Pride will make you obstinate at times when you ought to give way; pride will cause you to reject useful advice and friendly help; pride will lead you to lose your standard of objectivity.

In the team I am called upon to lead, the atmosphere is the be-all and the end-all. We are all of us yoked together in one common cause, each one forwarding that cause to the utmost of his own power and capacity. With us there is no distinguishing "mine" from "thine," and this does but benefit our common cause.

THIRD, passion. Bear in mind that science demands of a man his whole life. And if you had two lives they would not suffice you. Science demands of you great exertions and a noble passion. It is with passion that you must approach your work and researches.

Our country is opening up to scientists vast fields of activity, and we must give it its due; science is being fostered in our country bountifully, with simply unlimited bounty:

What shall I say on the position of young scientists in our country? Plainly and simply, it is this: they are given a great deal, but much will be required of them. And to live up to the great trust our country places in science is for our young people as for us, a point of honour.

* Novy Mir 1946, 3, p 144

A REMARKABLE DOCUMENT

By Alan Bush

MR. WERTH* has performed a useful service in making available excerpts from some of the important documents and reports of the recent Soviet controversy on music, which opened publicly with the "Decision of the Central Committee of the C.P.S.U.(B) on the opera 'The Great Friendship' by V. Muradeli." This was published on February 10th, 1948.

It had been preceded by a discussion between representatives of the Central Committee and of the Moscow Branch of the Union of Soviet Composers, and was followed by a conference of the same organisation and then by a conference of the whole membership of the Union.

The subject of the controversy itself is a matter which is of the utmost concern to the musical world, not only in the Soviet Union, but throughout the world generally. There is no disputing that a general crisis exists in music, the most striking peculiarity of which is the fact that at no previous time in musical history since secular concert-giving started in the 17th Century has the public shown so much indifference or even hostility to the works of living composers. In the 18th and 19th centuries, composers, Mozart and Beethoven among them, were attacked by hostile critics, but they also enjoyed the enthusiastic support of large sections of the general public. In fact the public of past periods, up to about the end of the 19th Century, tended to prefer the latest music to that of earlier times.

In the Soviet Union this phenomenon has made its appearance recently, that is to say, since the victory over fascism in 1945. Before then the Soviet public was enthusiastic about its living composers. Operas and symphonies by Soviet composers attracted great interest. It is true that they also aroused in some cases very sharp criticism, as for example in 1936 when "Pravda" published an article on Shostakovich's opera "Lady Macbeth of Mtsensk." Since the war, however, the interest of the public has waned, and the investigation of this situation by the Central Committee brought to light a number of questions of organisation in the musical world, which had not previously been made public. It became apparent that the whole organisation of Soviet music and its criticism, the award of the valuable Stalin Prizes, the possibilities of publication and performance, had got into the hands of a small group of musicians, composers and their admirers among the critics.

This group was headed by the composers named in the "Decision," whose work, in the words of the "Decision," "distinctly smacks of contemporary modernistic bourgeois music in Europe and America, which expresses the decay of bourgeois culture' the total negation of musical art, its impasse."

The "Decision" is, indeed, a remarkable document. It is the first occasion for about four hundred years on which a committee, imbued with a theory of human society, in this case that of Marxism, has expressed an opinion upon the development of music. The "Decision" sums up, as far as the practice of music in the Soviet Union at its present stage in the development of socialism towards communism, the theories of Marxism in relation to the development of music, and proposes practical steps which should be taken to put them into effect.

MARX, Plekhanov, Lenin, and our own Christopher Caudwell have all contributed to the understanding of the relation of art to society. The history of art since class society superseded tribal communism has been the history of the art of classes within society.

In recent times the bourgeoisie has been the ruling class; the ruling art of that period has been their art, the art which expressed different aspects of their emotions and world outlook. A ruling class has its art both in its progressive time and in its decay. Bourgeois civilisation is now in its last stages. Hence its art can be no other than an art which expresses "the decay of bourgeois culture."

In socialist society, on the other hand, the art will be the art of socialist realism. To create this art the Soviet composers must search for new ways of expression, since this is a new art. Such new ways must be sought for, as far as the Soviet musical world is concerned, as a development out of the classical traditions of the music of that country, retaining what is essential and developing new ways of treating this. Instead of this the composers inclined to formalism attempt to derive the new elements in their music from the latest productions of West European and American music. This introduces a two-fold eclecticism of style; it is contrary to national tradition and contains forms of expression characteristic of decadent bourgeois music and therefore least likely to serve as suitable ingredients in the art of socialist realism. Such are the main problems of the controversy.

The excerpts from the "Decision" and from the reports of these conferences are, of course, Mr. Werth's own selection. and very

* Musical Uproar in Moscow by Alexander Werth. (Turnstile Press)

likely his own translation. It is significant that Mr. Werth refers to the main document as the "Decree" and not the "Decision," as it is described in the V.O.K.S. Bulletin, a case of the author's selectiveness of epithet, determined by his knowledge of its associations. (This is vulgarly known as "smearing"). Moreover Mr. Werth, during the course of two introductory paragraphs, describes the "Decree" as "a most extraordinary document, and much grimmer than anybody had anticipated." Mr. Werth is very fond of quoting "anybody" and even "no-one," as when he states that "no-one thought Muradeli anything but a third-rate composer." And this columnist gossip reaches a climax, when he states that "some arrests were made amongst some familiar figures of the musical world." How curious that Mr. Werth should not mention who these familiar figures were, considering that a large number of names are mentioned elsewhere in his book, and even the physical appearances of some of the important personalities concerned, as, for example, when he describes Zhdanov, the chief representative of the Central Committee in this controversy, as having "the face of a cat: cold, cruel eyes, a receding catlike forehead, &c."

If I may for a moment plagiarise Mr. Werth's literary methods, I might remark that no-one expects Mr. Werth to know anything about music. Therefore one might excuse him for quoting other people's opinion, even under the convenient pseudonym of "everyone" or "no-one." But he is injudicious enough to spread himself in an appreciation of the composer, Nicolai Myaskovsky, one of those named in the "Decision" as "following a formalistic, anti-popular trend." (This is the wording in the official V.O.K.S. translation). Mr. Werth's appreciation of Myaskovsky contains the following sentence: "All his music was of a high professional standard, and some of it remarkable—for example, his Sixth Symphony, his Twenty-fifth Symphony, some of his quartets, and his piano music." At this stage I must ask the reader to excuse me, if I state that I am familiar with a considerable amount of Myaskovsky's music; I had the honour of conducting the first performances in this country of his Sixteenth Symphony, his Violin Concerto, and his Sinfonietta for String Orchestra. I am a great admirer of Myaskovsky as a composer; I regard two or three of his symphonies as being among the finest written by any living composer. I have no hesitation in stating that his Fifth Symphony is greatly superior to the Sixth. I regret that I have

no acquaintance with his Twenty-fifth, which has never been performed in this country, though a single copy of the score—which, no doubt, Mr. Werth has carefully studied—is in the library of the Anglo-Soviet Music Press. But I do know that his piano music is entirely negligible. Only ignorance and a desire to impress the public, who are not in a position to acquire more knowledge of the matter, could possibly have induced Mr. Werth to mention the piano music in the same sentence as the symphonies or even the quartets.

I hope that I have convinced the reader that Mr. Werth is not worth much, either as a commentator on the documents, or as a reliable reporter of the facts, least of all as an authoritative aesthete, in all of which guises he has injudiciously presented himself within the covers of this book. It is only fair to Mr. Werth to admit that in his book he does touch upon the general crisis of the musical world. He manages, however, to give the impression that the "Decree" goes about solving it in the wrong way.

Of course, when such criticisms are made and such organisational changes brought about certain possibilities arise. Disgruntled and second-rate composers may try to take advantage. Leading personalities whose talents entitle them to positions of prestige are excessively attacked by those whom they have previously ignored and derided. Personal dislike of a composer's tendency is wrapped in a theoretical justification to which it may be, in fact, foreign.

But the musical life of the Soviet Union has not come to a standstill as a result of this Decision. From December 21st to 29th, 1948, an All Union Conference of the Soviet Composers was held, during which a series of concerts took place. At these concerts 150 compositions written during the year 1948 and including 30 major works were performed. Among the 150 composers represented were all those specially mentioned in the Decision as belonging to the formalist group, except Prokofiev, whose opera "The Story of a Real Man" had been produced previously. Myaskovsky was represented by a new symphony, Shostakovich by film music, Khatchaturian by a Symphonic Dythramb to the memory of Lenin, and Shebalin by a String Quartet. Muradeli's new choral works were greeted as showing a great advance on the opera which was the special subject of the Decision.

It seems that the familiar figures of the Soviet musical world have escaped the arrest which Mr. Werth so uproariously trumpeted.

MOSCOW, 1949

By Henry Levitt

Treasurer of London Trades Council

I WAS privileged to go to Moscow as a delegate from the London Trades Council. At the invitation of the Moscow Regional Council of Trade Unions, I went for the May Day Celebration in the Red Square, arriving there a week before the actual celebrations took place.

Having previously been to Moscow ten years before, in July and August, 1939, I was immediately struck by the amount of new building which had taken place despite the war. In every direction in which one went in the City, building projects were going on. It is remarkable to notice the considerable use of capital equipment on a large scale; big central cranes and many other modern devices are to be seen on all sides as building takes place in accordance with the plans laid down for the development of the City.

In building, as I saw in a number of other industries subsequently, there was great emphasis on safety protection and workers' welfare. Commented Harry Weaver, London Organiser of the Building Trades Workers, who was my co-delegate—"You would have to want to commit suicide to fall off scaffolding of the average Soviet building job." The excellent arrangements made for the elimination of dust in a tobacco factory was another indication of the way in which the trade union organisations, which are responsible for safety and welfare arrangements in factories, do their jobs.

Naturally, one of the first things we did was to stroll through the streets of Moscow, which are particularly wide and kept scrupulously clean. We noticed that modern water-carts sprayed the streets several times daily. The traffic arrangements are efficient, the emphasis being on the rights of the pedestrian; and even though the traffic lights are in its favour the traffic is required to proceed at a crawling pace over pedestrian crossings. Citizens who cross at places other than at a recognised crossing are liable to a fine, which may be demanded on the spot by the police. As a consequence the street accident rate is extremely low.

The police are smart and when not on traffic duty are permitted to smoke whilst on patrol.

On the streets, after working hours, in the late afternoon and early evening, one sees the Muscovites out in full force. To-day

their clothing is considerably better than it was ten years ago. Now the clothes of both men and women seem of good quality and good cut, and compare quite favourably with Western capitals. Unlike ten years ago, the foreign visitor can no longer be distinguished by the cut of his clothes or the quality of his garments compared with the local article.

People all look very well-fed. Food in the canteens I visited seemed to be good, plentiful, and reasonably priced. Food shops were a sight to see—one feels ashamed to mention it at home at the present time. I went, without the need for a guide, into a number of food stores in different parts of the City, and saw housewives buying good quantities of unrationed foods—fats, butter, meat, ham, and other articles of food, tinned goods, and so on in good supply—the people obviously had plenty of money in their pockets to buy all these things. Russian wines and champagne seem to be quite moderately priced and are to-day being bought quite freely.

A comparison of prices in Moscow and London will not help the reader to appreciate the difference in living standards, partly because the general style of living differs so much. For example, the Moscow worker goes to the theatre far more than the average London worker. Books are very much cheaper. There are a great many social services provided without contribution. The Moscow worker always has money because there is no unemployment or short-time working. The prices of some foods such as meat and butter, are higher; milk is about the same; eggs are slightly cheaper. But the Moscow worker has more money to buy food, because the cost of other goods is lower, we gained the clear impression that the Moscow worker is eating better than the London worker.

I was able to visit a couple of sessions of the 10th Congress of the Soviet Trade Unions held in the Kremlin. There were 1,300 delegates. The meeting was in a very handsome hall, with galleries holding some hundreds of visitors from all over the Soviet Union, and other galleries with distinguished visitors from overseas and their interpreters.

I found the Congress very interesting, with a number of little incidents common to all Congresses of this kind—fierce criticism of the executive, differences of view strongly expressed, and many other human incidents, which made their Congress seem very much like our own T.U.C.

The report given by Kuznetsov showed

that the war devastated industry of the Soviet Union has been completely restored, and that there is a new and rapid growth in output of industry which is already 18 per cent. higher than pre-war. Tremendous efforts are being made to increase mechanisation to reduce and eliminate heavy labour. Forty per cent. of all specialists and technicians in industry are women, and equal pay for equal work is a fundamental law of the Soviet State. The eight-hour day is enforced by law, and no young person under 18 years of age is allowed to work more than six hours a day. During 1948 there was an 83 per cent. increase in expenditure on social insurance over pre-war; and during 1949 it will reach 100 per cent. Severe criticism was levelled at certain regional trade union committees for not having spent enough of the finance allocated them for welfare, sport, &c.

A typical example given of overfulfilment of the Plan was the gang of miners who had overfulfilled their plan for coal by three times, and in their spare time had planted 5,000 trees and laid 1,000 or so yards of pavement as a contribution to improving the amenities of their home town.

Most impressive of all was the treatment of young children. Here, visits to various kindergartens made one feel how much the Soviet Union is concerned about the welfare of the rising generation. On the afternoon when I visited the kindergarten attached to a bakery, mothers could feel quite satisfied with the way the children were being looked after. Those up to three years of age were asleep quietly in the little cots, while the older ones, 3 to 6 years of age, put on a performance of various national dances for us. These children obviously have every chance to develop their talents in the hands of people who are keenly interested in bringing out the best in them. This is not to say they are not quite human little creatures, as was seen when gentle cries of derision were uttered when one of their number misled them in one of their evolutions, and spoilt the play they were putting on for us. They equally forgave him a few moments later when they repeated the movement and were able to congratulate the little boy for doing it correctly a second time.

On the streets, which in central Moscow, at any rate, can be regarded as boulevards, one sees to-day considerable numbers of the Molotov Victory cars, a very handsome post-war product of Soviet industry.

I WENT over the Stalin Auto Works. This is a tribute to Soviet organisation. Built up since the 1917 revolution, to-day these works compare with Ford and Renault. The Director and his assistants are quite obviously on top of the job and have excellent relations with the workers in the

factory, as we could see for ourselves when we went round with them.

It is interesting to note that the Director here is a former fitter in the organisation, who has gone to the top of the tree because of his capacity to master the technique of his job.

The people of Moscow are great theatre goers; it was striking to see the theatres full to capacity every night. Punctuality is strictly observed. Nobody arrives late to shuffle over other people in getting into a seat. There is no smoking. There are attentive and enthusiastic audiences, and a complete absence of class distinction, all sorts of people sitting together.

The May Day demonstration itself on May 1st, was a sight which must be seen to be believed. For six and a-half hours everybody that can walk turns out, marching through the Square, 120 abreast—banners, colour, men, women and children, youngsters carried on the shoulders of their fathers, I suppose so that in the years to come they can say they have attended every May Day celebration since they were born. There was a great demonstration of the affection of the people for their Government, as they cheered Joseph Stalin and other leaders on the Lenin Mausoleum.

Palaces of Labour attached to the factories are really wonderful institutions. The one attached to the Stalin Auto works has a large theatre, dance floor to hold 2,000 people, three smaller halls each capable of taking 300 people, used for lectures for people seeking to improve their knowledge of the works of the great writers of literature.—Russians know more about Shakespeare than most of us do and one would hesitate to argue with them about our great national bard—There are some 30 small rooms for people to practice in the arts, dancing, music, &c. In one room we saw some 30 youngsters between the ages of 18 and 24, of both sexes, come to practice ballet dancing. It might not be the usual thing in Britain for youngsters to come out of a motor factory and practice ballet, but it is not regarded as at all peculiar in Moscow.

Twice, at a moment's notice, we were taken to the Radio Station and asked to broadcast our impressions. There was no Censorship on what we said, we were allowed to speak without any interference.

The attitude towards us coming from Britain was very pleasant. When we went to the theatre, it would not be immodest to say we were given the greatest reception of all the delegates introduced to the audience as coming from abroad. They lifted the roof off when told we represented the trade union movement in London, England. Everywhere we were asked to convey the greetings of the Soviet people and say how deeply they wanted to live in peace with the rest of the world and particularly with the people in Britain, for whom they quite clearly have a very high regard.

THE STALIN PLAN FOR RUSSIAN AGRICULTURE

By G. V. JACKS, M.A., B.Sc.

Director of the Commonwealth Bureau of Soil Science

A GRANDIOSE 15-year plan for the re-organization of land use in the semi-arid region of the European part of the U.S.S.R. is revealed in a decree dated October 20, 1948, issued by the Council of Ministers and the Central Committee of the Communist Party of the U.S.S.R. The (translated) title of the decree is "On the Plan of Protective-Forest Planting, Adoption of Crop Rotations with Leys, and Digging of Ponds and Reservoirs to Ensure High and Stable Harvests in the Steppe and Forest-Steppe Areas of the European Part of the U.S.S.R." For short, it is called the Stalin Plan.

According to *Pravda* the region concerned embraces about 80,000 collective farms and some 120,000,000 hectares (300,000,000 acres). Rainfall is of the order of 10-20 inches a year. In some parts of the region severe droughts can be expected in one year out of three, in others in one year out of four, and in most of the rest in one year out of six. Wind and water erosion is common and in places far advanced. The decree ordains that certain general measures, outlined below, shall be carried out over prescribed areas in the next five years and that the entire plan shall be completed in fifteen years. At the end of that time drought and soil erosion shall have been completely abolished.

Beginning in 1949, all State and collective farms in the steppe and forest-steppe region must begin to develop a planned agriculture based on the ideas of Dokuchaev, Kostychev and Williams and known as the grass-rotation (*travopolnaya*) system. This system requires:

- (a) planting of protective forest belts on watersheds, along the boundaries of crop-rotation fields, on the slopes of gorges and ravines, on the banks of rivers and lakes, around ponds and reservoirs, as well as afforestation and fixation of sandy areas;
- (b) a correct organization of the territory with the introduction of rotations of food and fodder crops as well as rational utilization of the arable lands;
- (c) a correct system of soil cultivation with proper care of the crops and primarily the adoption of widespread fallow ploughing, autumn ploughing and stubble cultivation;
- (d) a correct system of application of organic and mineral fertilizers;
- (e) sowing with selected high-yield seed varieties adapted to local conditions;
- (f) development of irrigation on the basis of the utilization of the local water flow by digging ponds and reservoirs.

Although it is clearly impossible to get statistically reliable evidence in a short time of the superiority of the grass-rotation system over the usual system (? grain-fallow), individual examples are cited in which markedly higher yields were obtained where the Dokuchaev-Williams line was followed than where the traditional system prevailed. Thus the Gigant State Farm, near Rostov, reports average yields of winter wheat on fields protected by forest strips of 2.5 tons per hectare (one ton per acre).

One of the most impressive features of the plan is the programme for establishing large shelter belts of different selected tree species. The major shelter belts to be planted in the period 1950-65 include:

A State forest shelter belt from Saratov to Astrakhan on both banks of the River Volga, 100 metres wide and 900 kilometres long.

A 600-kilometre State forest shelter belt in the direction Penza-Ekaterinovka-Veshenskaya-Kamensk on the Northern Donets, on the watersheds of the Rivers Koper and Medveditsa, Kalitva and Berezovaya, consisting of three strips, each up to 60 metres wide with 300-metre gaps in between.

A 170-kilometre State forest shelter belt in the direction Kamyshev-Stalingrad, on the watersheds of the Rivers Volga and Ilovlya consisting of three strips, each 60 metres wide with 300-metre gaps in between.

A 580-kilometre State forest shelter belt in the direction Chapayevsk-Vladimirovka, consisting of four strips, each 60 metres wide with 300-metre gaps in between.

A 570-kilometre State forest shelter belt in the direction Stalingrad-Stepnoy-Cherkessk, consisting of four strips, each 60 metre wide with 300-metre gaps in between.

A 1,080-kilometre State forest shelter

belt in the direction Mt. Vishnevaya-Chkalov-Uralsk-Caspian Sea, on the banks of the Ural River, consisting of six strips (three on each side of the river), each 60 metres wide with 100-200-metre gaps in between.

A State forest shelter belt in the direction Voronezh-Rostov-on-Don on both banks of the River Don, each 60 metres wide and 920 kilometres long.

A 30-metre wide and 500 kilometre long State forest shelter belt on both banks of the River Northern Donets from the town of Belgorod to the River Don.

These represent, besides the belts along the courses of the main rivers, four major, roughly parallel and interlocking belts stretching across the steppes from north to south.

Responsibility for carrying out this programme rests with the Ministry of Forestry.

It is further decreed that the whole region should be divided into rectangles, apparently about 80×40 sq. km. in area, running north and south and surrounded by protective forest strips, the establishment and maintenance of which will be mainly the task of the collective farms.

These belts seem to be 60 metres wide, and their total area will be 5,709,000 hectares. In association with the afforestation plans there are complementary plans for establishing and mechanizing a large number of nurseries up to 200 hectares in area to provide millions of seedlings each year of some scores of different tree species specifically recommended for the nineteen main soil types of the region. Instructions are also issued for the mass training of nurserymen and foresters.

Perhaps the most interesting part of the decree from the scientific point of view is the insistence on the adoption of ley farming as the basic system of agriculture throughout the region. The execution of the decree might, indeed, be regarded as the putting into practice on a huge scale of the agricultural principles evolved by the late Prof. V. R. Williams and now regarded as infallible throughout the Union.

Williams's book in which he propounds his theories is now available in English under the title "Principles of Agriculture" (Hutchinson, London). Williams regards agriculture as a single, indissoluble complex—as a kind of machine which transforms the energy of the sun into the food of mankind. The successful agriculturist is he who constructs the most efficient machine and operates it in the most economical manner. It is a basic part of his philosophy that the main limiting factor to agricultural productivity is the farmer. "There are not good and bad soils, but only good and bad agriculture." He considers such things as the law of the minimum and the law of diminishing returns as inventions of the bourgeoisie designed to mask the restrictiveness of an outmoded capitalist economy.

According to Williams, there are three essential "shops" in the agricultural factory, all of equal importance and inseparable from each other—crop husbandry, livestock husbandry and soil cultivation. The crop is the mechanism by which solar energy is converted into vegetation, only about a quarter of which, however, is suitable for human food. The function of livestock is to convert the remaining three-quarters into useful products, but again only about a quarter of the energy taken in by animals is converted into meat, milk, hides, wool, &c. Most of the remainder should be returned to the soil as manure which, however, is useless until it is mineralized. The purpose of soil cultivation is to bring about the most complete and efficient decomposition of organic matter, and so complete the cycle with the minimum of loss and the maximum of useful production. The farmer who pays undue attention to any of these bases to the neglect of the others loses in efficiency, and his land loses in productivity.

The object of agriculture is to ensure a continuous and high level of production, this being a measure of the productivity of agricultural labour, and depends on the creation and maintenance of a high level of soil fertility. Soil fertility, in its turn, depends on the presence, throughout the growth of the crop, of sufficient quantities of the two terrestrial growth factors—moisture and nutrients—to enable the maximum use to be made of the solar growth factors—light and heat—in plant production. In physical terms this means the creation and maintenance of a stable crumb structure in the soil, supplemented, where necessary, by irrigation and fertilizing. Williams, indeed, defines an agricultural system as "a system of scientifically planned measures the purpose of which is to produce in the soil new amounts of active humus necessary for the creation of a stable crumb structure."

This is the central principle around which Williams designed his grass-rotation agricultural system which at the present time is being continuously and unreservedly praised in the Russian scientific and lay press, and is soon to be submitted to its supreme test in the Stalin Plan. It is a system which Williams himself always insisted must be adopted in its entirety if the results demanded by and achievable under a socialist economy were to be achieved. There is nothing novel about any of the separate features of the system, or in the manner in which they are integrated into a complete system. What is novel is that whereas most established agricultural systems have evolved over long periods by processes of trial and error, Williams's system has been developed from theoretical premises (based, however, on practical experience), and is to be applied on an enormous scale, lock, stock, and barrel, as Williams left it at his death in 1939. It is frankly as much a political as an agricultural project. Williams is the recognised exponent of the application of Marxism-Leninism to agriculture, and what he says goes unquestioned.

One of the most important parts of

Williams's system consists in the "organization of the territory," i.e., planning the cropping system in relation to soils and topography. It is this feature of the system that has presumably given rise to the assertion that the Stalin Plan can only be carried out under a socialist economy; it would certainly have been impracticable with small-scale, unco-ordinated peasant holdings.

In enunciating the basic principles of land-use planning Williams takes a catchment as the unit. Watershed areas tend to be wet after rain, but liable to suffer from droughts in the surface soil which tends to be deficient in plant nutrients; these areas should therefore be kept in forest not only because the soil conditions suit tree growth, but also for purposes of soil conservation and water regulation. The soils of the bottom lands tend to be permanently moist and rich in plant nutrients, and the soils of the slopes midway between those of the watershed and the valley.

ALL the cultivated land must be put under some kind of grass-arable rotation. Williams distinguishes two types of such rotations, each of which has its proper place in the organization of the territory—the "field" rotation which should be located mainly on the higher parts of the relief and slopes, and the "fodder" rotation suitable for low-lying and bottom lands, and the slopes of ravines and gullies.

The field rotation consists of annual crops with relatively small nutrient and water requirements, and the necessary ley should not occupy the ground for more than 2-3 years in the rotation. When once a soil structure has been created and only requires to be maintained, a one-year ley should suffice, but it must be of perennial species. The fodder rotation includes a longer (3-6-year) ley and cereal, vegetable and industrial crops with high nutrient and water requirements. Both kinds of rotation are capable of wide variation to suit local conditions and the overall Government plan, but the grass break may not be varied. In the field rotation the grass break is a kind of unavoidable evil necessary for the restoration of the structural stability of the soil. In the fodder rotation, on the other hand, the cultivation of perennial grasses is the pivot round which the whole rotation turns. Its main purpose is to provide a fodder base for livestock. However, the mostly high-priced and exacting crops grown in the arable break of the fodder rotation are well adapted not only to make good use of the abundance of plant nutrients released when the ley is ploughed up, but also to compensate the collective farm for the comparatively low cash return obtained from the long ley.

The decree lays much emphasis on the

importance of a correct system of soil cultivation according to Williams's principles, which require the scuffing of stubble immediately after harvest as a means of destroying weeds, followed by autumn ploughing to a depth of 20-22 cm. (8-9 inches). This ploughing must be done with a mould-board plough furnished with a special kind of skim-coulter, known as a fore-plough (*predpluzhnik*), the purpose of which is to cut off the top 10-cm. layer of soil and to throw it to the bottom of the furrow where it is covered by the second 10-cm. layer of soil which is thus brought to the surface. The purpose of this operation is to create anaerobic conditions in the former surface soil so as to kill off weed seeds and overwintering insect and fungus pests, and to allow humus to accumulate, while in the new surface (former subsoil) layer strongly aerobic conditions will prevail, causing rapid decomposition of the humus previously accumulated under anaerobic conditions, the liberation of plant nutrients and the formation of a crumb structure ready for the next year's crop.

In many other semi-arid countries the tendency nowadays is to recommend non-ploughing methods such as trash farming. During the war some evidence was obtained in the Middle East that deep ploughing of semi-arid to arid land resulted in one or two exceptionally good crops of wheat or barley, followed by a precipitate fall in yield. Whether or not the same thing happens in Russia, or whether the fall can be prevented by ley farming or other fertility-conserving measures remains to be seen.

Stubble cultivation followed by deep autumn ploughing with the aid of a fore-plough are the chief measures of cultivation insisted on, but there are several others to be used according to the conditions. Bare fallowing is to be used more extensively, e.g., on 3,000,000 ha. in 1950 and on 9,000,000 ha. in 1955, as a means of conserving soil moisture. The wholesale adoption is ordained of measures, such as the erection of shields, for increasing snow retention. This has long been advocated and is apparently already widely practised on scientific lines in the steppe region. Indeed, snow retention is one of the main reasons given for the establishment of protective forest strips, and it is probably in this way that they will mostly justify the cost and labour of their establishment.

Experience of windbreaks outside Russia does not justify the assumption that they can significantly modify the water regime of the soil beyond a distance of 100 metres or so from the windbreak. A zig-zag form is found much more effective than the straight form envisaged in the plan. In America great store is set on the psychological effect of windbreaks especially near dwelling places, but, judging by the published map of the proposed shelter belts this aspect appears to have been ignored in the Russian plan. American experience also is that in general a

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TWO SHORT STORIES

By L. Panteleyev

I. The Letter "I"

[THE LAST LETTER IN THE RUSSIAN ALPHABET "YA" IS BOTH A LETTER
AND THE PERSONAL PRONOUN "I"]

ONCE upon a time I taught a small girl to read and write. The girl was called Irinushka. She was four years and five months old and she was a very sensible little person. In a matter of some ten days or so we got through all the Russian alphabet and could freely read "papa" and "mama," "Sasha" and "Masha," and we only had one letter left to learn—the last in the alphabet ("I"—in translation).

And it was on this last letter that Irinushka and I came a cropper.

As usual, I showed her the letter, let her examine it thoroughly, and said: "And this letter, Irinushka, is 'I'."

Irinushka looked at me in amazement: "You?"

"Why, 'you'? What do you mean, 'you'? I told you—this letter is 'I'."

"The letter 'you'?"

"No, not 'you'—'I'!"

"Not 'you,' but the letter 'you'."

"Irinushka! I expect we've been working too hard. Don't you really understand that this is not I, but the letter called 'I'."

"Why, of course I understand—I do, really . . ."

"What do you understand?"

"That this isn't 'you,' but a letter called 'you'."

Well! Really! What could one do with her? How was I to tell her that "I" was not I, "you" not you, "she" not she, and that "I" was only a letter?

"Look," I said finally, "say it as if to yourself 'I' you understand, to yourself."

She seemed to have understood. Then she tossed her head and asked: "Can I say it?"

"Of course."

She was silent. Her head bent, her lips moving.

"Well?"

"I've said it."

"I didn't hear what you said."

"You told me to say it to myself I'm saying it under my breath."

"What are you saying?"

She turned her gaze on me and whispered in my ear "you."

I couldn't stand it any longer, shot out of my chair and began to rush about the room, clutching my head.

I was boiling inside like a kettle. Poor

Irinushka sat hunched over her A B C, looking at me out of the corner of her eye and whimpered miserably. She was probably ashamed of being so stupid. But I, too, was ashamed that I, a grown man, could not teach a small person to read a letter as simple as "I."

Then I had an idea. I went quickly to the little girl, touched her nose with my finger and asked: "Who's this?" She replied "I."

"See! Do you understand now. And this letter is 'I'."

"I understand . . .", she replied. And I could see that her lips were trembling, her nose wrinkling—she was on the verge of tears.

"What do you understand?"

"I understand that that is 'I'."

"Right! Good girl! And this is the letter 'I.' Clear?"

"Quite clear," she replied, "that's the letter 'you'."

"Not 'you' but 'I'."

"Not I but you."

"Not I, but the letter 'I'."

"Not you but the letter 'you'."

"Not the letter 'you,' heavens, but the letter 'I'."

"Not the letter 'I,' heavens, but the letter 'you'."

I sprang up again and started pacing the room.

"There's no such letter," I shouted.

"Understand, you senseless child. There isn't, nor can there be, such a letter. There is the letter 'I.' Be good enough to repeat after me, 'I,I,I,I.' 'You, you, you, you,'"

she muttered through clenched teeth. And then she put her head down on the table and burst into such loud and bitter sobs that my anger evaporated instantly. I was sorry for her. "All right," I said, "It's clear we've over-worked. Take your books and exercise books and you can run along."

"That's enough for to-day."

She stuffed her satchel anyhow with her bits and pieces and without saying a word to me, stumbling and sobbing, left the room.

I, left alone, thought about it—what was I to do. How were we to get past the accursed letter "I."

"Well," I decided, "we'll forget it. Bother it. We'll start our next lesson with reading. It might work out better that way."

And the next day, when Irinushka, gay and flushed from playing, came for her lesson, I didn't remind her of the past, but

simply opened the A B C at the first page that came to hand and said: "Well, inadam, read me something . . ."

As was usual before starting to read, she wriggled on her chair, sighed, and poking her finger and little nose into the page moved her lips and read, without drawing breath:

"Uvy had an uris."

I shot out of my chair in astonishment.

"What, what? What Uvy, what uris?"

I looked at the A B C and, written in black and white, I read:

"Ivy had an iris."

It strikes you as funny? It did me.

I laughed and said, "Ivy, Irinushka, 'Ivy and not Uvy!'"

She was surprised and said, "Ivy? . . . hen this letter is 'I'?"

I was just going to say: "Of course—it's 'I,'" when I realised what would happen if I did. No, we weren't going to be caught again. So I simply said, "Yes, this letter is 'you'."

True, it's not very good to tell a fib. In fact, it's very bad to lie. But what could I do? The argument might have started all over again and Irinushka might have said, "Uvy and uris, instead of 'Ivy' and 'iris,' 'unk' instead of 'ink,' 'unfant' instead of 'infant,' all her life."

Thank goodness, though, Irinushka has grown up, says all her letters correctly, and writes me letters without a single rustake in them.

II. Honour Bright

IT'S a great pity that I can't tell you the name of this small person, where he lives, and who his father and mother are. In the shadows, I hardly had time to find out what his face was like. I only remember that he had a freckled nose and that his knickers were short and held up not by a belt, but by the kind of braces which are pulled over the shoulders and fasten somewhere on the stomach.

I happened one day to go into some gardens, I don't know the name, on Vasilevsky Island, near a white church. I had an interesting book with me and I became so absorbed that evening descended unnoticed. My eyes were dazed with the sunset's after-glow, and it became fairly difficult to read. I shut my book, rose to my feet and made my way to the exit.

The gardens were empty, lights were glittering in the streets and the park-keeper was ringing his bell somewhere behind the bushes. I was afraid they would close the gates and hastened my steps. Suddenly I stopped. I thought I heard someone crying behind the bushes.

I turned into a side-alley, where a small stone house glistened white in the dark—the kind of house found in all city gardens—a booth or a keeper's lodge. Near a wall of this house there stood a small boy of about seven or eight, his head bent, sobbing loudly and inconsolately. I came up and called to him. "Hi, what's up, laddie?"

Instantly he stopped crying, as though to order, lifted his head, looked at me and replied: "Nothing."

"What do you mean, nothing? Has someone upset you?"

"No."

"Why are you crying then?" It was still difficult for him to speak. He hadn't swallowed all his tears and he was still sobbing a little, hiccupping, and sniffing.

"Let's go," I said to him, "look, it's late and the gardens are closing." And I tried to take his hand. But he hastily tore his hand from mine and said, "I can't."

"Can't what?"

"Can't go."

"What! Why? What's wrong with you?"

"Nothing," he replied.

"Aren't you well?"

"No—quite well."

"Why can't you come then?"

"I'm a sentry," he replied.

"What sentry?"

"Can't you understand? We're playing."

"Well, who are you playing with?"

The little boy was silent, sighed and said, "I don't know."

At this moment, speaking frankly, I thought that the boy must definitely be ill, that he was not all there.

"Listen—what are you saying. How can it be? You're playing and don't know with whom?"

"Yes," said the boy, "I don't know. I was sitting on a seat when some big kids came up and said, 'Want to play war?' I replied: 'I do.' We started playing and I was told 'You're a sergeant.' One of the big boys—he was a marshal—brought me here and said: 'This is a powder dump. And you're to be sentry. You stay here till I change guard . . .'"

"I said 'alright,' and he said: 'Honour bright, you won't go away?'"

"Well, I said—'honour bright,' I won't go away."

"And then what?"

"That's how it was. I stood and stood and they don't come."

"Aha," I smiled. "Did they put you here a long time ago?"

"It was still light."

"Where are they then?"

The boy sighed heavily again and said:

"I think they've gone."

"How do you mean, gone?"

"They've forgotten."

"Then why are you still standing here?"

"I gave my word of honour . . ."

I nearly burst out laughing but restrained myself and thought that there wasn't anything funny about the story and that the boy was right. He'd given his word of honour, so he'd to stay, whatever happened, whatever the consequences. And whether it was a game or not made no difference.

"So that's how matters stand," I said to him. "What are you going to do?"

"I don't know," said the boy, and began to cry again.

I wanted very much to help him. But what could I do? Could I go and look for the stupid boys who had put him on sentry-duty, taken his word of honour and then run off home themselves? Where could I find them now? . . . They had probably had their suppers, gone to bed and were now fast asleep. But he was still standing guard, in the dark. And hungry, probably.

"I expect you're hungry?"

"Yes, I am."

"Look here," I said, thinking a bit. "You run along quickly and have supper, and I'll stand guard for you.

"Yes," he replied, "But is that all right?"

"Why not?"

"You aren't a soldier."

I scratched the back of my head. "That's true. It won't work. I can't even relieve you—only the commander can do that."

And then I suddenly had an idea. If only a soldier could relieve the boy of his oath and take him off duty, that was the answer. I'd have to find a soldier. I did not tell the boy all this and only said, "Wait a minute, I'll be back." I rushed to the exit, wasting no time . . . the gates weren't locked yet and the keeper was walking somewhere in the most distant corners of the gardens, ringing his little bell.

I began to wait at the gates for a soldier to pass—some lieutenant or even a ranker. As if on purpose, however, not a single soldier was to be seen in the street. Black overcoats glimmered on the other side of the street and, excited, I thought they were marines, rushed across and saw they were not sailors but factory-school apprentices. A tall railwayman passed in a beautiful overcoat. But even a railwayman in a beautiful overcoat was useless to me at that moment.

Unlucky, I wanted to go back to the gardens when I suddenly saw, just on the corner, at the tram stop, a commander's cap. I don't think I have ever been as happy in my life as I was at that moment. I rushed headlong to the stop. But before I reached it, a tram came along and the commander, a young cavalry major, was just about to board it with the other passengers. Breathless, I rushed up to him, grabbed his arm and shouted: "Comrade major! Wait a minute! Comrade major!" He turned, looked at me in amazement and asked: "What's up?"

"Well, you see . . . in the gardens, here, there's a boy on sentry duty—he can't leave, he gave his word of honour. He's very small, he's crying . . ." The com-

mander looked at me nervously, I expect he thought that I was ill too, and not all there. "What's it to do with me?" he asked. The tram had gone and he regarded me crossly. But when I had given him more details, he didn't hesitate and said at once: "Let's go. Let's go. Of course. Why didn't you tell me right away!"

When we reached the gardens the keeper was just padlocking the gates. I asked him to wait a few minutes as my little boy had got left behind in the gardens and, together with the major, raced into the depths of the gardens. We had some difficulty in finding the white hut in the dark. The boy was standing where I had left him and again, although this time very quietly, he was still crying. I called him. He was so pleased he shouted joyfully. I said: "I've brought the commander."

Seeing the commander, the boy straightened up somehow, drew himself up and became several inches taller.

"Comrade sentry," the commander said, "what's your rank?"

"I am a sergeant."

"Comrade sergeant, I order you to leave the post entrusted to you."

The boy was silent, snuffled and then asked: "What's your rank? I can't see how many pips you have."

"I am a major."

Then the boy put his hand to the broad peak of his little grey cap: "Right, comrade major: orders—to leave my post." And he said this in so ringing and smart a manner that we both couldn't help it and burst out laughing. And the boy, happy and relieved, laughed too.

We had no sooner left the gardens than the keeper slammed the gates behind us and turned the key several times in the lock. The major stretched out his hand to the boy.

"Good work, comrade sergeant," he said, "you'll make a real soldier. Goodbye."

The boy muttered something and added "Goodbye." The major said goodbye to us and, seeing his tram coming again, ran to the stop. I, too, said goodbye to the boy and shook hands with him.

"Perhaps I ought to see you home," I asked.

"No, I live nearby. I'm not scared," he replied.

I looked at his small freckled nose and thought that truly he had nothing of which to be afraid. A boy so strong-willed, so reliable, would not be frightened by the dark, or by hooligans, or by more frightful things.

And when he grew up . . . One couldn't know what he would be when he grew up, but, whatever his job, one could be sure that he would be a real man. I was glad, thinking about this, that we had become acquainted.

And I shook hands with him again with pleasure.

(Note: This story was written during the recent war).

Both stories translated from the Russian by Eleanor Fox.

A HOME FOR LITTLE ONES

By E. Gennings

(Specialist on Methods of Pre-School Education of the Moscow City Board of Education)

THIS home for children of pre-school age that I visited in the winter is housed in a small mansion near Ostankino Park on the outskirts of Moscow. The home cares for 75 orphans from three and a half to seven years of age, most of whom lost their parents during the War.

Everything is done to make them forget that they are orphans. Each child has his own corner, his toys, his favourite books, his games. The members of the staff see to it that the children are healthy and happy, that they lead a life rich and full of interest, that they develop their personality. Nina Davidova who has been working in the home for over eight years is loved by all the children. She is a mother to each one individually. They bring to her all their joys and sorrows, knowing that "aunt Nina" will always help them. In the evening when all are in bed she'll kiss each child good night.

Activities begin immediately after breakfast. The youngest draw, model with plasticine, cut out and paste pictures. Those a bit older learn to count, sew dolly's wardrobe, and make toys—they too model and draw. They spend much of time out in the fresh air, including walks. They were dressed with great care and very warmly, in the cold weather. In the grounds of the house there is a hill for tobogganning and a small rink. The snow-house with a chimney and a roof of coloured snow was made by the children themselves. When the frost is stronger than usual the children are all eager to be out-of-doors. "We're going to make a flower bed!" they told me, "yes, yes, a real flower bed, only a winter one!" Two boys took me out to watch their efforts. They seemed to be very amused at my doubts of a flower bed in winter. I watched them diluting red, blue and green paint in several watering cans and carefully pouring this coloured water into specially prepared metal moulds. This water froze quickly and they watched it turn into ice with shouts of "look! it's ice already. See how we make flowers." The assistant took several frozen moulds indoors and immersed them for a second in hot water and then quickly took out some beautiful coloured flower-shapes. By this time the children had already made a flower bed of ice and were ready to "plant" it with flowers of their own production.

"See how we make a winter flower bed!"

they laughed, and I must admit it really looks effective.

Things were very lively around the toboggan-run, the older boys and girls were giving rides to the little ones, who enjoyed it immensely. The children here have their skis, sledges, and shovels for snow and some have skates too. In the cosy attractive rooms in the evenings each child can indulge in his favourite hobby or pastime, which are very varied.

They all love to look at and show their personal "treasures" which they keep in all sorts of boxes and drawers. They show them to each other and to the assistant telling her the stories connected with each article. This picture-postcard Lucy received from her elder brother, who is in a flying school; this star her daddy gave her when he was leaving for the front; and here are some beautiful pictures presented by pioneers of a neighbouring school! The staff are always about during this "free time," watching the children's moods, and unobtrusively satisfying any childish need. The kindness and tact and understanding of the assistants makes the home as near a family as possible. They are concerned in developing the individuality and personality of each child. No stereotypes here.

Sunday offers special events, a new children's film in the hall; or an invitation to the juniors from the seniors to see their amateur shadow-theatre. Folk dancing, collective games, and singing make up the happily full day. In summer picnics in the park or excursions to gather flowers or berries fill the day.

Much care, energy and taste is expended to make the national holidays memorable. On such occasions the building is festively decorated, the children learn new songs' dances and poems and everyone gets presents of sweets or toys. The staff reads much on education, and once a month attends a central meeting of children's homes' assistants to discuss the problems arising out of their work.

Each home has its "patron" (a factory or other organisation). "The patrons" visit the home regularly and help in a variety of ways.

Most of the Moscow homes are in the suburbs where life is quiet and healthy. The large plots of land attached to the homes serve as playgrounds and kitchen and flower gardens. Here in natural surroundings, cared for by the Government and trained staffs grows a multitude of healthy, happy, youngsters, future citizens of the land.

SOVIET CHESS

By William Winter

SINCE the last issue the activities of the Soviet masters have been mainly domestic. No sooner was the 16th Championship completed than the semi-finals of the qualifying rounds for next year's event were started. There were four tournaments played at Leningrad, Moscow, Vilnius and Tbilisi and, as is always the case, they produced some really brilliant chess and threw up several new stars.

Geller and Petrosin first and second in Tbilisi are new to tournaments of this class and other new comers to the final are Kolmov, Kopilev and Sokolski but these have previously appeared in the semi-final rounds.

By far the strongest section was played at Leningrad where the grandmasters Bondarevsky and Levenfish took part. Bondarevsky tied for first place with Taimanov, with Levenfish a close third. Furman, who put up such a magnificent performance in the XVth championship tied in Vilnius with Mikenas and Sokolski. The Moscow section proved a triumph for youth, the three first places being filled by Aronin, Goldberg and Lublinsky, who finished ahead of such experienced masters as Alatorzev and Kan. Alatorzev led for three-quarters of the tournament but could not stand the strain so well as his younger opponents. The final will be played early next year.

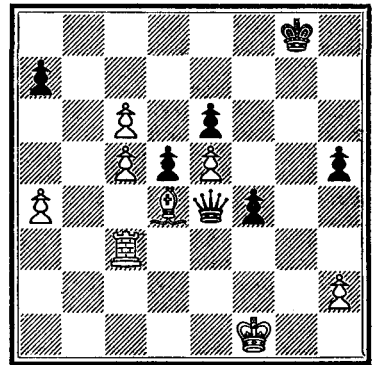
It is good to see that the Soviet Union is taking an active part in chess politics as represented by the International Chess Federation (F.I.D.E.). An imposing Soviet delegation attended the meeting in Paris for the details of the forthcoming tournament to find a challenger for Botvinnik's world title. It was settled that the tournament should be played in Budapest next year, after a somewhat heated discussion in which many delegates pressed the claims of Buenos Ayres. Largely through the efforts of the Soviet delegation, the Hungarian capital was finally chosen, a result which the European masters will have learnt with profound gratitude, as the Argentinian climate can be very trying to those who are not used to it. On the invitation of the U.S.S.R. it was also agreed that the tournament for the Women's world championship, which has been in abeyance since the war, should be held in Moscow from December 15th to January 10th. Women's chess has made great headway in the Soviet Union in

the last few years and it seems likely that they will add this crown to their honours.

In the following position from the XVth Soviet championship, the veteran master Konstantinopsky solves a ticklish problem in an ingenious manner. He has won the Queen but the problem is to prevent his opponent from making a new one.

Position after White's 38th move

Black : A. Konstantinopsky



White : P. Keres.

Play continued 38.... P-B6 (a)

39 B-K3	Q-Kt3
40 K-K1 (b)	Q-QKt8
41 K-Q2	Q-Kt ch
42 R-B2	QXP
43 P-B7	QxP ch
44 K-Q1	QxP
45 P-B6	P-K4 (c)
46 BxP	P-Q5
47 B-Kt6	P-Q6
48 R-B1	QxB
49 P-B7	QxP
50 RxQ	P-B7

resigns

- (a) If 38Q...QxB, 39 P-B7 will draw. If 38...Q-R2 39 P-B7, QxP; 40 P-B6 followed by BxP, and B-Kt 6 and the pawn cannot be prevented from queening. The move played threatens mate in two.
- (b) If 40 B-B2, Q-Kt 8 ch; 41 B-K1, Q-K5 and wins.
- (c) The winning move. Black will have to give up his Queen but his pawns decide the day.

SOVIET SPORT

By James Armour Milne

THOSE responsible for the production of that splendid little publication "Sport in the U.S.S.R." (Soviet News, Is.) had no time to sit back and admire their handiwork before the Soviet athletes began to make their wonderfully comprehensive list of U.S.S.R. records in ten different sports look partly out of date.

Not at all satisfied with the high level at which their records stood at the beginning of the summer season, the Soviet athletes everywhere pledged themselves to seek to exceed their previous best performances.

Twice this season the 400 metres sprint relay record has been beaten. In this event four runners each run 100 metres (190 yds. 1ft., 1½ ins.), passing a baton from one to the other while travelling at full speed.

An All-Leningrad team had run the distance in 42.2 seconds in 1936. The decimal fraction was brushed lightly off by a Moscow Dynamo team, composed of Grigoryev, Sukharev, Komarov, and Karakulov, in June. Komarov is a former sprint champion of the U.S.S.R. Karakulov is European champion at 200 metres, holder of the U.S.S.R. record in the 100 metres, joint record-holder at 200 metres.

<i>Free-Style</i>		<i>U.S.S.R.</i>		<i>Olympic</i>
100 metres	.. ..	57 secs.	.. ..	57.3 secs.
400 metres	.. ..	4 m. 43.8 secs.	.. ..	4 m. 41.0 secs.
1,500 metres	.. ..	20 m. 3.7 secs.	.. ..	19 m. 18.5 secs.
<i>Breast-Stroke</i>				
200 metres	.. ..	2 m. 29.8 secs.	.. ..	2 m. 39.3 secs.
<i>Back-Stroke</i>				
100 metres	.. ..	1 m. 8.8 secs.	.. ..	1 m. 6.4 secs.

Within a fortnight the new record was put out of joint by a U.S.S.R. team in a match against Czechoslovakia. Two of the Moscow Dynamo runners who had made the fortnight-old record, Sergei Komarov and Nikolai Karakulov, were members of the U.S.S.R. team that reduced the record to 41.8 seconds.

The other two were Peter Golovkin and Lev Sanadze, this latter a fine newcomer from Tbilisi who has beaten champion Karakulov several times this season and who has set himself the difficult task of beating the older man's U.S.S.R. records of 10.4 seconds for 100 metres and 21.6 seconds for 200 metres.

The Moscow Dynamo quartette of Grigoryev-Sukharev-Komarov-Karakulov, winning the U.S.S.R. championship, cut into the U.S.S.R. record for the 800 metres (874 yards, 2 ft., 8½ ins.) relay, in which each

runner covers a stage of 200 metres, again with the passing of the baton being effected by means of a flying start. Their time of 1 min. 28 secs. was exactly one second faster than an All-Union team had done a year previously.

In swimming, Vitali Uzhakov, who has set himself the tremendous task of finishing the year as holder of every free-style record from 100 metres to 1,500 metres (1,640½ yards), is well on the way to realising his ambition.

He started the summer already holder of four U.S.S.R. records. He lowered his own 400 metres record to 4 mins. 43.8 secs. Then he brought Leonid Meshkov's 500 metres record down from 6 mins. 5.6 secs. to 6 mins. 5.2 secs.

Now he is in strict training for onslaughts on the only records not yet listed under his name, the 200 metres (2 mins. 8.9 secs.) and 300 metres (3 mins. 26.5 secs.), both held by Meshkov, the greatest all-round swimmer the U.S.S.R. has produced.

Back-stroke champion Nikolai Kryukov is another of the season's swimming record-breakers. He brought his own 100 metres record down from 1 min. 8.9 secs. to 1 min. 8.8 secs. A mere flash of the hand at the finishing end of the pool, but still an improvement in form.

To give some idea of the high standard

attained by Soviet swimmers, comparison of U.S.S.R. records with the times returned by the winners at the Olympic Games at Wembley last year is interesting.

That cold comparison of actual figures is the best guide to the astounding advances made by Soviet swimmers, particularly the men. It shows that Vitali Uzhakov is in the world class as a free-style sprinter. It proves that Semyon Boichenko was probably the greatest breast-stroke exponent in history when he made his 200 metres by means of the modern "butterfly" stroke.

Boichenko has since lost a little of his phenomenal form, but this is not surprising as he is over 30 years of age and has had a long spell as champion and record-holder, although not always able to withstand the youthful challenge of the powerful ex-seaman, Leonid Meshkov, a native of Stalingrad.

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1948 STALIN PRIZES IN THE ARTS

Stalin Prizes were instituted in 1940 to commemorate the 60th birthday of J. V. Stalin. They are awarded by a Stalin Prizes Selection Committee of Specialists appointed each year, for outstanding work in science, technology, inventions, and the arts.

THE 1948 Stalin Prizes in the Arts (announced April 10th, 1949), this year cover all fields of literature except literary criticism, and the arts in all aspects.

In literature many of the prizes go to lesser-known and new writers, as well as to several writers from the National Republics. Among the works selected are full-length novels such as Semeyon Babayevsky's "Cavalier of the Gold Star," a novel of post-war reconstruction, and Mukhtar Auevov's historical novel "Abai." Of the 22 prizes in fiction half go to lesser-known personalities and eight are for long short stories.

The eleven poetry prize-winners include K. Simonov and N. Tikhonov, and S. Marshak for translation of Shakespeare's Sonnets, but a number of the other poets are not as yet well-known.

There are six drama prizes including one for "All Clear" (Green Street), by Anatoly Surov, which was the Moscow Arts Theatre production for its 50th anniversary celebrations in October, 1948.

The twelve films considered worthy of prizes this year range from Fadeyev's "Young Guard," with the director and several of the cast winning prizes, through a feature documentary biography of Michurin, to documentaries on Poland, Hungary and Albania, and a colour "U.S.S.R. Air Force Day" documentary. A total of fifty-nine people received prizes for participation in one form or another in these films.

Cantatas, ballet, songs, symphony and concerto are honoured in the music prizes, which are almost without exception awarded to new or rising composers. Six prizes go to executants, one of whom is K. K. Ivanov, chief conductor of the U.S.S.R. State Symphony Orchestra; two art directors of famous folk-song choirs and others are among the honoured.

Prizes for dramatic productions, for their producers and actors, this year go to the State Academic Maly Theatre for "The

Moscow Character" (the play itself won a Stalin Prize in 1948), to the Moscow Arts Theatre for its production of "All Clear" (Green Street), to theatres in Kiev, Kuibyshev, and Uzbekistan.

Prizes for opera productions go to the Bolshoy Theatre for its new staging of "Boris Godunov" with awards to several of the cast. Other prize-winning productions are "Ivan Susanin," "The Bartered Bride" and "Brizhan and Sara," in Kiev, at the filial of the Bolshoy Theatre, and in Kazakhstan. An individual prize goes to Gombozhar Tsygynzhapov, U.S.S.R. People's Artist, for his services in the development of the Buryat-Mongol Theatre.

Two Georgian ballet dancers—Ilya Sukhishvili and Nina Ramishvili—are honoured with Stalin first prizes for new repertoire work in the State Georgian Dance Ensemble and for their individual dancing. The ballets "Raimonda," staged by the Leningrad Kirov Academic Opera and Ballet Theatre, and "Leili and Medzhnun," a production of the Tadjik Opera and Ballet Theatre, win awards. In addition to dancers honoured for their work in these ballets, an individual prize goes to ballet-master Tatiana Ustinova, for her production of folk-dances for the famous State Russian Pyatnitsky Choir.

The Kukriniki (pseudonym of three painters who work together), win a first prize in painting for the picture "The End"—depicting the last hours of Hitler and his Generals and Politicians in the underground bunkers of Berlin in 1945. There are thirteen other prizes for the graphic arts. The three sculpture awards are for portrait sculpture of Heroes of the Soviet Union and one of Chernyshevsky.

In 1947 (announced 1948), the only prize in architecture went to the late Academician Shchusev for his design for the Tashkent Opera and Ballet Theatre. In 1948 there were four first and four second prizes in architecture, all without exception for skyscraper designs for Moscow buildings.

E. F.

BOOK REVIEWS

The Foreign Policy of Soviet Russia. Vol. II., 1936-41. By Max Beloff. (Oxford University Press.) 21s.

THIS work like the first volume reviewed in this journal (No. 1, Spring 1948) is published under the auspices of the Royal Institute of International Affairs. The author deals briefly with Soviet policy in Europe as a whole, the Middle East, and Far East. Relations with the U.S.A. are only slightly touched on, the main attention being directed to Europe generally and Great Britain, France and Germany in particular.

As one might expect from a work by Mr. Beloff, the book is very well written and documented, but suffers from the same fault as the first volume—the strong anti-Soviet bias of the author. True, the facts very often get the better of this bias and the general picture which emerges is that of a sincere striving by the Soviet Government for collective security against Fascist aggression—a striving which was frustrated by the hostility to Soviet Russia, of the Governments of Britain and France.

The attitude of Britain and France in the so-called non-Intervention Committee set up in connection with the Fascist rebellion in Spain and in the long-drawn out negotiations with the U.S.S.R.; their complacency in the face of repeated acts of aggression by Germany, in the Rhineland and against Austria and Czechoslovakia, emerge very clearly from the accounts given by Mr. Beloff, and yet he says quite seriously that:—

“From March to August 1939, the Soviet Union still retained the choice between committing itself to the forces gathering to resist German aggression, and coming to an arrangement with the aggressor which would permit it to stand aside from the conflict.”

As a fact, there was then no sign at all that on the part of Britain and France there was any “gathering of forces to resist German aggression.”

In view of the British and French procrastination in the negotiations and their, in effect, refusal to come to a firm political and military agreement with the U.S.S.R. for mutual assistance in case of German aggression whether it came via Poland, the Baltic States or other small countries bordering on the U.S.S.R., only one choice lay before the U.S.S.R. It was either to come to some understanding with Germany which would, if only for a time, stave off an attack against them, or to wait with folded arms till Germany attacked them probably via one of the non-guaranteed small border States. In the latter case

Britain and France would look on with, at best, benevolent neutrality towards Germany whilst the latter, as so many influential political and military personalities thought at that time, proceeded to go through the U.S.S.R. as a knife through butter. (This was the expression so often used later in 1941, when Germany attacked Russia).

The Soviet leaders evidently realised very clearly the trend of events. Of the examples given in this volume perhaps the most striking is the statement by Litvinov to an American journalist towards the end of 1937:—

“Before attacking the Soviet Union, the Germans would go West; and when ready to do so those ‘bandits’ would come to Moscow and ask for a pact. Meanwhile, Austria was the first on the agenda, and Czechoslovakia next. German designs on Czechoslovakia would not involve the Soviet Union in war because the pact between the Soviet Union and Czechoslovakia only came into operation if France fulfilled her own obligations to that country; and,” said Litvinov, “France will not fight.”

Throughout the book and more particularly in a final chapter on “The Principles of Soviet Policy,” the author would seem to be rather non-plussed by the real mainsprings of Soviet foreign policy, he says:—

“... we have not at our disposal the means to see even in outline the nature of the conflicting interests and objectives whose tensions have to be resolved. Once again, there are obvious and easy over-simplifications. But the bare fact remains, that we know so little about the foreign policy of the Soviet Union because we are so far as yet from understanding to the full the working of its institutions.”

We are inclined to think that the author really has stumbled on the correct solution to the problem of the “mystery” of Soviet foreign policy to bourgeois historians and politicians: they just do not understand the principles and working of Soviet institutions. As a result the author draws some fantastic parallels between “the inter-relations of the Counter-Reformation and the Hapsburg dynasty” and “the Russo-Marxist alliance of 1917.”

Soviet foreign policy is based above all, and before all, on maintaining and defending their Socialist State against capitalist onslaughts. The author is quite right when he says that “the regime is bound to be continually threatened so long as non-Communist States exist,” although the reason is not, as he asserts, the Marxist-Leninist ideology but the quite natural hostility of the capitalist countries which cannot look kindly upon a regime where capitalist exploitation has been abolished.

In support of his interpretation of Soviet foreign policy Mr. Beloff gives the following quotation from a chapter by the Soviet

historian Tarle in the "History of Diplomacy" but omits the important passage we give below in italics:—

"Soviet diplomacy is built on conditions which are in principle entirely new. That is—it is the diplomacy of the only Socialist State in the world." *"The task it sets before itself is to ensure peace for the peoples of the Soviet country and to establish such external political conditions as are necessary for their creative work, such an aim coincides with the interests of all progressive humanity. As a result, Soviet diplomacy is a most important factor in the international struggle against aggressors, war incendiaries and their supporters—in the struggle for peace, liberty, progress and genuine democracy."*

"The high vocation of Soviet diplomacy is made easier by the fact that it wields a weapon possessed by none of its rivals or opponents. Soviet diplomacy is fortified with the scientific theory of Marxism-Leninism. This doctrine lays down the unshakable laws of social development. By revealing these norms, it gives the possibility not only of understanding the current tendencies of international life, but also of permitting the desirable collaboration with the march of events. Such are the great advantages held by Soviet diplomacy. They give it a special position in international life and explain its outstanding successes."

What Mr. Beloff fails to understand is that although a real Socialist or Communist country in a generally non-Socialist world must always be prepared against attack, its own paramount need is peace; peace to reconstruct and construct its own national economy; peace to raise the cultural level of all its people; peace to pursue scientific research of all kinds.

It is no part of Leninist-Marxist ideology that having overthrown capitalism in their country a successful Socialist country must attack capitalist countries and establish Socialism or Communism there by force.

On the contrary, so long as any capitalist country is willing to live in peace and pursue genuinely friendly trade and other relations with a Socialist country such as the U.S.S.R., the latter is ready to respond wholeheartedly. Nor does this ideology preclude the possibility that under given circumstances one or more capitalist and imperialist countries may be peace-loving or peace-seeking whilst others are more actively aggressive. The irony which Mr. Beloff implies on this point in a number of passages and notably on Page 384 when he says: "While on the night of 22 June (1941), the Kremlin was silent, Russia and the world waited on the voice of the British arch 'imperialist,' Winston Churchill," is altogether misplaced. Of course, the anti-Fascist world (and the Fascist, too, for that matter) waited to hear whether the Tory imperialist Churchill would have sufficient perspicacity to see that Russian assistance was essential if Britain was to come out victorious over her enemy Germany.

This made Churchill none the less Tory,

none the less imperialist, but at that particular historical moment, the interest of Socialist Russia, of capitalist Britain, and of the rest of non-Fascist Europe coincided in so far as it was to their common interest to defeat Nazi Germany. It was unfortunate that Neville Chamberlain and other influential politicians in Britain and France did not understand this earlier, when a genuine alliance with the U.S.S.R. might have prevented the second World War or at the very least made it less costly and of much shorter duration.

The book contains useful maps and bibliography and in spite of the author's attitude makes useful and interesting reading.

ZELDA K. COATES.

Political Power in the U.S.S.R.

Julian Towster. (Oxford University Press. New York, 1948). 30s.

IT is a pleasure in these times to take up a weighty volume of American origin which deals with the U.S.S.R. and which is not packed full of crude falsehoods. The land on which the Statue of Liberty turns its back and the production of expensive anti-Soviet slander have recently become two such closely associated conceptions that a reminder of the other America—the one which Lenin used to admire—comes almost as a shock. But it is a healthy shock.

Professor Towster—a Pole by origin, and with a record of work in several United States Government departments, including the Department of State—makes a detailed and documented study of the theory and structure of the Soviet State—Marxist views on the subject, the development of the Soviet Constitution, nationalities in the Soviet Union, the Party, the Soviets and the judicial system—which is critical enough to arouse some disagreement, but yet transparently sincere in its effort to be fair.

As a result, the book is a valuable work of reference for many aspects of the subject it considers, and no bad introduction to the U.S.S.R. for serious-minded students.

It is all the greater pity that it is marred by a number of unnecessary errors. The period in the U.S.S.R. which ended in the elimination of exploiting classes, of which Stalin spoke at the XVIII Party Congress, by no means finished in 1932 (p. 38): 1936/7 would be nearer the mark. The reference to Stalin's speech in January, 1918, on the subject of self-determination for the working people, not the bourgeoisie (p. 61), ought to have given Stalin's explanation that it would be "completely senseless" to ask for power to the workers only where there was no Socialist revolution yet, as in Lithuania or Poland. The author seems to suggest (p. 84) that the Mongolian People's Republic is not called "Socialist" only because of its ties with the U.S.S.R. are less "fully per-

fectured"—when the reason is simply that its economy is not yet Socialist. He follows the Webbs in their erroneous suggestion that, between meetings of the Central Committee of the C.P.S.U., there is a "presidium" which is "supposed to represent it" (p. 154)—when in reality the Political Bureau, Organising Bureau and Secretariat do so. It is quite wrong to date the principle of a "monolithic" party, with a leadership which leads, and is not merely "the mediator between opposing currents," from 1917 (pp. 174-5). Trotsky was fighting Lenin and the Bolsheviks on this as long ago as 1904.

Professor Towster is again at sea in suggesting (p. 194) that "a total scratching of the candidates' name by all the voters in the area" is necessary under the Stálin Constitution to defeat him: if less than 50 per cent. of the voters go to the poll, or if over 50 per cent. of those who do go to the poll strike out his name, the candidate cannot be elected. He is also quite wrong in stating (p. 316, footnote) that "strikes are illegal in the U.S.S.R.": there is no ground whatever for this frequently repeated assertion, and in the years when strikes occurred in State factories—1923-5, 1928—it is well known that it was managers and party secretaries who were blamed for letting matters come to such a pass, rather than the workers. It is not justifiable to state, because separate secondary schools for boys and girls have been introduced in the larger towns, that the U.S.S.R. "has abandoned co-education" (p. 363).

Yet, in spite of these and some other blemishes, and of an extremely indulgent eye for the peculiarities of "Western democracy" when giving the U.S.S.R. the inevitable lecture on liberty, Professor Towster's book is well worth reading. He gives a wealth of material, in particular, showing that in the U.S.S.R. there is no inherent antithesis between society and the individual, and that "the people are actively associated in the propagation and execution of policy, and are instilled with a growing sense of participation in government" (p. 400).

An inquirer asks: "Does this book replace the Webbs?" The answer is no—neither in scope, in readability, nor in warm humanity. Perhaps Professor Towster would not want to replace them. But the chilly reception which his work has received in "orthodox" reviews is a pretty accurate indication that supporters of good Anglo-Soviet relations can gain much from reading from it.

ANDREW ROTHSTEIN.

Kievan Russia. By George Vernadsky. 412 pp. Yale University Press. (London, Geoffrey Cumberlege). 27s. 6d.

ENGLISH language studies of detailed aspects and periods of Russian history are still in a woefully infant stage with the bulk

of the real work yet to be done. Against this background Professor Vernadsky's book on "Kievan Russia" is to be warmly welcomed as being a serious and detailed study of a crucial period of Russian history.

It is an interesting reflection of contemporary American thinking that it is considered necessary to begin the book with an introduction on Kievan Russia's place in Europe which discusses such questions as whether Russia is European or Asiatic, whether the Russian mind or outlook is necessarily "totalitarian" and what is the "geopolitical" background of the study.

These concessions to the present having been made the book tells the story of the Kiev State from 878 to 1237, the period which starts with Oleg, includes the conversion to Christianity and ends with the first appearance of the Mongol invaders. The author intersperses discussions of the economic foundations, social organisation, government and administration of the State, and the general way of living and standard of civilisation.

In a book of this detail it is inevitable that there should be a good deal that is contentious, and it is Vernadsky's merit that where he differs from others he says so and gives his reasons. Of many such points two, where he tends to differ from contemporary Soviet historiography, are worth noting.

How far did the Kiev State stem from the Varangian or Norse invaders? That they played some part nobody will dispute. Pankratova takes the view that the number of invaders who settled in the country is negligible and those that did were rapidly assimilated. At the end of his book (p. 337) Vernadsky appears to share this view and deprecates "a tendency in modern historical scholarship to overestimate Scandinavian influence and represent the Norse element as the leading factor in the formation of the Kievan State and culture." Against this must be read a bald statement on p. 19 that the political history of Kievan Russia opens "with an attempt on the part of the Norse rulers of Kiev to build a vast empire" which has to be considered, *inter alia*, as "an episode of Viking expansion." Few Soviet historians would accept this.

The second question is that of feudalism. Was Kievan Russia feudal or not? Soviet historians tend to say yes, Vernadsky to say no. The disagreement perhaps begins with a quotation by Vernadsky from the Small Soviet Encyclopædia which defines feudalism in economic terms and regards the feudal state as such as a political superstructure. This is very largely an argument about words because neither the Marxists in general nor Soviet Marxists in particular hold that economic societies do not have political structures, and they do not deny that the general political structure of feudalism was that of a hierarchy of rulers through whom authority was mediated from the top to the bottom. Beyond this Vernadsky agrees

with Grekov and Iushkov that the Manor was becoming important in Kievan Russia but disagrees with them as to the proportion of serf and slave labour, and argues also that there was a money (and un-feudal) economy.

The present reviewer is not competent to discuss the facts at issue. It is, however, important to note that there is probably no example of a feudal society about which the things that Vernadsky says here could not be said to some degree or other. In English feudalism there were often enough groups below the serfs who can be described as slaves. The economy was largely non-monetary but money there certainly was and, indeed, throughout Europe Jews lent money to Christian sovereigns who might not accept loans on interest from Christians.

There are other interesting points of debate in the book together with a large amount of evidence which gives a convincing picture of Kievan society and which will recommend the book to all serious students of Russian history.

STANLEY EVANS.

Changing Attitudes in Soviet Russia: The Family. By Rudolph Schlesinger. Routledge & Kegan Paul Ltd. 25s.

DR. SCHLESINGER in his book makes available (in translation) to the student of sociology many original Soviet documents dealing with the related problems of woman's emancipation, marriage and the family. Women in capitalist countries still fighting for full equality of status and opportunity for all women, will find in the book much that is encouraging and thought provoking.

They will be encouraged to find that ordinary women given genuine political and social responsibility respond magnificently in dealing with just those questions which loom so large in family life. They will be made thoughtful by the question as to whether the desired equality is possible under capitalism.

Dr. Schlesinger points out in his introduction (p. 7) that "Soviet policy has never discarded the institution of the family . . . Marxist criticism was directed against the traditional man-dominated family," yet he devotes 30 pages to Kollontay whose ideas of free love and the "withering away" of the family were never accepted by more than a small group of the revolutionary intelligentsia. The laxity of what after all was the small section of industrial youth in the 1920's, was due much more to the inevitable revolutionary reaction from Tsarist oppression than to the teachings of Kollontay.

Similarly it is to be regretted that a man of the reputation for scholarship and honesty of Dr. Schlesinger was unable in 1948 to get

hold of the many available documents which make the only contribution on the abolition of co-education—by A. Orlov—completely out of date and an inaccurate description of present conditions.

Dr. Schlesinger appears unable to escape his bourgeois conditioning. For him there are only two motives for marriage, sexual love or the economic incentive, each clear and self-contained. It is presumably this belief which leads him to say (p. 405) "The desire to give one's children a start in life better than the average, which has been made possible by re-introduction of fees for higher education . . . *may prove a powerful incentive to marriage* (my italic) for the Soviet intelligentsia." To-day over 80 per cent. of students are receiving their higher education free, and anyone who through work as well as ability reaches the standard can have the full grant. Are we now to expect the intelligentsia in the absence of this "powerful incentive" to refrain from marrying?

Anton Simeonovitch Makarenko: Russian Teacher. By W. L. Goodman. (Routledge & Kegan Paul) 8s. 6d.

HOW much wiser was the former village teacher Anton Simeonovitch Makarenko! It would have been very useful had Mr. Goodman given us something from Makarenko's lectures and writings on the role of the family.

But this is carping, for except for the *Road to Life* and an article in Vol. III. No. 2 of the *Anglo-Soviet Journal*, there has been nothing until Mr. Goodman's book to bring Makarenko's educational experience and theories to the notice of English educationists, and for this we are grateful. Mr. Goodman has been deeply impressed by what he has read of Makarenko and succeeds in conveying his enthusiasm to the reader, who must be stimulated and challenged by what he reads. That is an achievement for which credit is due to the author.

However, to understand and appraise correctly Makarenko's contribution to education, and his lasting achievements, two things are necessary, a thorough understanding of Soviet Society and a thorough knowledge of all Makarenko's work. For many of the methods he employed have been used by educationists before him—in Britain, on the Continent, and in America—yet his influence was profound, lasting and evident. It can be seen to-day. The same cannot be said of the other experimental educationists. Wherein lies the reason—in the man, or in the social structure? This is a question of vital importance to educationists. It is well that Mr. Goodman has raised the question even if he has not answered it.

It is not ingratitude that makes the

reviewer suggest caution in the acceptance of Mr. Goodman's interpretation of Makarenko and especially of the Soviet Union. It may be due to compression, but the actual school scene has not much resemblance to the picture the author gives, and his reading of the Soviet purpose of education after the revolution, or of the collectivisation of agriculture, would hardly be accepted by anyone in the U.S.S.R. In spite of these blemishes the book is worth reading. It will challenge educational complacency.

BEATRICE KING.

A Russian Journal. By John Steinbeck with 69 photographs by Robert Capa. (Heinemann, 1949). 21s.

"IT seems to us now the most dangerous tendency in the world is the desire to believe a rumour rather than to pin down a fact," writes Steinbeck, and so in an effort to counteract this pernicious tendency in connection with the U.S.S.R., he set off with his photographer friend Capa, to do a piece of real objective reporting about Russia and about the things in Russia, which he felt sure ordinary people wanted most to know, but somehow could not learn about.

He went to find out, what the people wear and eat, do they have parties, how do they make love, what do they talk about, do they dance and sing and play? Do the children go to school? In other words this is a book about the "private life of the Russian people," and in giving us this as honestly and objectively as only a skilled observer, who is also a great democrat and a tolerant lover of mankind and a believer in the common people, can do, Steinbeck has rendered a great service not only to Russia, but to all people who truly wish to see a world at peace.

This book is the more valuable, because he realises the great difficulties of this task. He writes: "Probably the hardest thing for a man is the simple observation and acceptance of what is. Always we warp our pictures with what we hoped, expected or were afraid of. In Russia we saw many things that did not agree with what we had expected and for this reason it is very good to have photographs, because a camera has no preconceptions, it simply sets down what it sees." (p. 35). Thus the 69 excellent photographs selected out of Capa's 4,000, considerably add to the value of this book, though both Capa and Steinbeck bewail the difficulties and frustrations engendered by the fear of the camera everywhere throughout the Soviet Union.

Steinbeck is particularly good at making his reader see things from the Russian point of view: e.g., on p. 88, he reports one Russian farmer's question: "What would the American Government do if the Soviet Government loaned money and military

aid to Mexico with the avowed purpose of preventing the spread of democracy?" and again on page 31, when an American State Department man is grumbling about not being allowed really to get into touch with the Russian people, an understanding member of the Embassy remarked: "Well, let's suppose in Washington you heard that one of your secretaries was going out with somebody from the Russian Embassy, what would you do?" "Why, I'd fire her immediately!" and the Embassy man said: "Well, you see, may be the Russians feel the same way!"

It is this ability for an American democrat to see the Russian point of view that makes his book such a fine contribution to a better understanding between the English-speaking people and the Russians.

Steinbeck does not pretend that there are not some fundamental differences of outlook—so fundamental, that sometimes he finds he just cannot begin to make his Russian questioners understand his point of view, e.g., on the question of leadership and Government (p. 28 and p. 170), or on the question of the function of the writer in Society (p. 164). He writes that no American or Briton could agree with the Russian presentation and interpretation of history (p. 36).

Steinbeck shows us how great and how simple the Russians are, how human and how heroic. To-day many of us tend too often to forget what Russia suffered during the war, and what she is still suffering in consequence. Through Steinbeck's book this theme runs like a sombre refrain. (See pp. 40, 60, 63, 121, 122, 125, 133). "How they could do it, we have no idea. How they could live underground and still keep clean and proud and feminine. It was a strange and heroic travesty of modern living," he writes of Stalingrad's women (p. 120). "More and more we were realising how much the Russian people live on hope, hope that to-morrow will be better than to-day."

"Again and again we are shown that above all things the Russians fear war," and "they speak only in terms of invasion of their country because they have had it..." (p. 58). It were well that we who have not had it, should have this Russian attitude stressed. As Steinbeck says on page 88, "they know no more about their foreign policy than we know of ours... Finally our host stood up and he raised his glass and he said, 'Somewhere in all of this there must be an answer and there must be an answer quickly... for the world needs peace and needs peace very badly!'" "And he pointed to the two, who were struggling with the heavy beams to build a roof. 'This winter those two will have a house for the first time since 1941. They must have peace, they want their house. They have three small children who have never had a house to live in. There cannot be in the world anyone so wicked as to want to put them back in holes under the ground.'"

There is nothing to add to this.

M. E. BEGGS-HUMPHREYS.

Realist Music. By Rena Moisenko.
(Meridian Books Ltd.). 15s.

IF, running my eye along a shelf of books on musical subjects, I came across one entitled "Realist Music," what should I expect to find therein? Surely a study or an assessment of those historical instances of musical representation (even to the point of the unpleasant) which have abounded from the school of Ockeghem to Mossolov or Honegger.

They are exponents of realism in music as are Zola, George Moore or Hardy in fiction. And amongst the examples I should anticipate that subtle distinctions might be drawn between the naturalism of Beethoven's quail and cuckoo and the more imaginative, creative realism of his thunderstorm.

But turning to the pages of *Realist Music* I find what purports to be an account of socialist realism as exhibited in the works of twenty-five outstanding Soviet composers. Confusion immediately enters. Yet first let me say that, in 1942, Madame Moisenko published a brochure, *Twenty Soviet Composers* (Keynote series, Workers' Music Association), most of which is embodied in the present volume with this difference: she has reviewed that material in the light of her understanding of the recent criticism of certain works of Soviet musicians by their peers, to which, at a critical moment, was added the weight of State recommendations.

Madame Moisenko is a vocalist; her interest focusses itself mainly upon operatic works, though she never as much as mentions Muradeli, one of whose operas was the touchstone of the controversy. In this respect she quotes from a speech made by Stalin in 1936 in which he defined what he meant by a "Soviet people's realistic music drama," i.e.:

1. Socialist subject matter; the people's fight for freedom, country and socialism, &c.
2. Realistic musical language couched in the idiom of its native country.
3. New heroes, contemporary men, born within a new political system, having, accordingly, a psychology specifically different from any other.

While the basis of Stalin's thought is well-known to be materialist (in the Marxian sense), and while dialectical materialism is actually taught in the Conservatoires of the U.S.S.R., there is nothing in Stalin's suggestions to commit composers to that precise representation of the real thing, the crow of a cock or the roar and clangor of a foundry, so much as to a musical expression of life as it is verily lived, seen closely.

Indeed, realism of that kind has been found peculiarly typical of bourgeois culture by thinkers who have no connection with the Soviet aesthetic. In the meantime, Zhdanov (another name that gets little

more than a glance in the book) made the serious charge that certain composers showed marked tendencies towards working in isolation from the masses of the people, thereby negating Stalin's desiderata; and, to make his reproof more pungent, he added the remark that no expense had been spared to advance the cultural attainments of the Soviet citizens and to bring them nearer modern developments.

In the face of facts like these, Madame Moisenko permits herself the following sentence: "It seems, then, that the closer music follows the printed text, the more realistic it becomes. And this is the contemporary point of view, which characterises Socialist Realism in music and makes of music a 'Living Art' belonging to the mass of Soviet citizens." To make her point clear she cites Britten's *Albert Herring* "wherein the closest possible relationship exists between the text and the music."

She has, in fact, lost sight of the significance of her theme, namely, *socialist* realism. Had she gone a step further, to Britten's *Rape of Lucretia*, for instance, she would have seen that though that music achieved an equally close relationship to text, it certainly had nothing of *Socialist* realism about it. Had she examined the criticism levelled against certain Soviet writers she would have realised that she herself had undermined the very basis of the claims she wished to make.

Moreover, throughout the book Madame Moisenko uses such a profusion of capital letters and inverted commas that the reader never knows where emphasis lies or quoted authority begins. Prokofiev, she says, "used to enter into polemics with exponents of the School of Romantic Pianism." Is this an academy? If not, what is romantic pianism and who its exponents? And in purely musical questions such as her reference to Khachaturian's violin concerto she is equally confused: "A *cadenza* for violin solo of five minutes duration is a quaint idiomatic feature of the work." What does she mean?

The publishers can hardly be acquitted of irresponsibility in this matter. Had they been at all regardful of the author's reputation, not to say their own, much of the confusion of its contents would have been cleared up at the source.

As it is, in order to seize Madame Moisenko's intention, which I believe to be absolutely honest, the reader needs to filter its substance with the utmost care. With such contradictions in thought undigested and therefore unresolved, the book is quite without authority.

Certain important facts she grasps, as for instance, that since Soviet composers are "citizens of the U.S.S.R. they share in the common urge to render their compositions harmonious with the Soviet achievements of the Union. Thus, the question of 'State interference' in music matters does not arise." But almost in the same breath, talking of the changes wrought by the Revolution, she assures us that "an abstract, philosophical thought made this cardinal change in

spiritual outlook possible, and altered the character of the human heart." Shades of Marx, Lenin, and Stalin!

H. G. SEAR.

Sergei Rachmaninov. (Denis Dobson Ltd.). 8s. 6d.

MR. JOHN CULSHAW has solved a difficult problem in his book on Rachmaninov. Phenomenal popular success, such as this composer achieved with "The Prelude," the C minor Pianoforte Concerto, and certain songs, does not necessarily correspond to intrinsic musical qualities it is profitable to discuss.

Nor does the capacity to hit off certain emotional moods, in which the public delights, signify that the composer's personality is susceptible of the same romantic interpretation.

As Mr. Cecil Gray did for Sibelius, Mr. Culshaw makes out an attractive case for an all round consideration of Rachmaninov's music, and he will doubtless succeed in convincing his readers, seeing their evident predisposition in its favour.

Another parallel with Sibelius is the fact that the admirers of both composers are practically limited to Anglo-Saxon countries. Where English and American audiences are enraptured, their German and Latin counterparts see nothing at all. So much the worse for them, no doubt; but the circumstance is illuminating. Can a composer be in the great class with this limitation of appeal? To be convinced we need a stronger argument than one derived from the psychology of audiences.

Rachmaninov's music is nevertheless immensely sympathetic. His sources of inspiration are intensely subjective, more so even than Tchaikovsky, from whom his style fundamentally derives. It was derivative and therefore pessimistic. But it was true to himself, the picture of a fastidious and noble nature. He must have been conscious of the intimacy of the musical confessions which his works were, and have hesitated before giving them to the world. He did so mostly in the form of short piano pieces and songs, or alternatively as transcriptions of literary or pictorial subjects like "The Bells" and "The Island of the Dead." His failures occurred when he attempted too much and they do not count against him. They can be forgotten.

Rachmaninov was the acknowledged greatest pianist of his time. After the death of Busoni he stood alone and was the interpretive master of many styles besides his own. Truth and reserve were its hall marks. And could we ever forget those wonderful hands?

I only met Rachmaninov a few times and even had I not respected his music (which I did), the quite extraordinary calm of his personality would have made an unforget-

table impression. I naturally tried to persuade him to broadcast; his reply always was that he could not abide being "listened-in" to.

EDWARD CLARK.

The Cossacks. By Leo Tolstoy. Translated from the Russian by Vera Traill. London, Hamish Hamilton. (The Novel Library). 6s. net.

Dead Souls. By Nikolai Gogol. Translated from the Russian by George Reavey. London, Hamish Hamilton. (The Novel Library). 6s. net.

THE appearance of new translations of the masterpieces of the great Russian novelists is to be welcomed. Most of the old translations are out of print, and some of them, it must be admitted, are not worth reprinting.

Although the teaching of Russian in this country is on the increase, it is unlikely that a large proportion of educated English readers will ever know enough of the language to enable them to read the great novels in the original. The translator therefore has a great opportunity and a great responsibility. His function is to bring the English reader into touch with works which represent the Russian mind almost as completely and powerfully as Shakespeare and Dickens represent the English mind. Every age needs new translations of Tolstoy, Dostoevski, and Gogol, just as every age needs new translations of Homer, Aeschylus, and Plato.

Miss Traill's version of Tolstoy's beautiful early story is lively and readable though there is rather too much American slang in it for the English reader who may be puzzled, for instance, when he reads that a disgruntled Cossack called his comrades "yellow"—until he remembers that "yellow" is American for cowardly. In any case it seems too strong a word to represent the Russian adjective which means "shy" or "timid." Sometimes, however, her colloquialisms are happy enough as when she translates the Russian "pravo yei bogu" by "Cross my heart."

A comparison of her translation with the Russian text and Louise and Aylmer Maude's scholarly version shows that, while she is more slangy and colloquial than the Maudes, she is much less accurate. The present reviewer has tested her translation by comparing a number of passages from the two translations with the Russian text. Here is a specimen. The Maudes' translate the opening sentences of Chapter VI as follows:—

"The male population of the village spend their time on military expeditions and in th cordon—or 'at their posts' as the Cossack say. Towards evening, that same Lukashka

the Snatcher, about whom the old women had been talking, was standing on a watch tower of the Nizhni-Protosk situated on the very banks of the Terek. Leaning on the railing of the tower and screwing up his eyes, he looked now far into the distance beyond the Terek, now down at his fellow Cossacks, and he occasionally addressed the latter."

Here is Miss Traill's rendering of the opening of the same chapter:

"Just before sunset, Luka the Snatcher was standing on the watch tower of the Nizhni-Protosk outpost, situated near the banks of the Terek. He leaned on the railing of the tower and screwing up his eyes gazed into the far distance beyond the river; from time to time he looked down upon his comrades below and spoke to them." The reader of these two extracts may well wonder whether they are translations of the same passage from the same novel. Actually the first (that of the Maudes) is a close and accurate, though not very graceful, translation of the Russian. Miss Traill has omitted the first sentence altogether and has condensed the next two sentences, leaving out the important reference to the old women's conversation about Lukáshka (a diminutive which abbreviates to Luka). Examples could easily be multiplied. Miss Traill's version is a pleasant, readable book, but she has taken unpardonable liberties with her text. Actually her version is greatly inferior to that of the Maudes, which is quite as readable and has the added advantage of being a truthful and scholarly rendering.

Gogol is a much more difficult author to translate than Tolstoy. His great work *Dead Souls* is, unfortunately, known to most English readers through the very inaccurate and badly written translation first published

in 1893. A new version was badly needed and Mr. George Reavey has produced one which is at once accurate and readable. He is more successful in the comic and realistic parts than in the great lyrical passages which, indeed, are untranslatable except perhaps by a poet with a genius equal to Gogol's own. Here is his version of the famous apostrophe to the night:

"But the night, O heavens, what a night is being achieved up there on high! And the air, and the sky, lofty and remote spreading out and boundless, clear and ringing up yonder from its unfathomable depths!" This is accurate but rather wooden. "Achieved up there on high" is a bad patch of "translatorese" almost worthy of Bohn. However, in the dialogue and the realistic descriptions Reavey is admirably natural and direct. A passage like the following does not read like a translation:

"Blast him, how he whistles!" Platonov said. Chichikov burst out laughing.

"No wonder he doesn't feel bored, after such a sumptuous repast!" Platonov continued. "Anyone would feel sleepy after it, wouldn't he?"

"Yes, but if you will excuse me, I still cannot understand how one can feel so bored," Chichikov said. "There are many ways of warding off boredom."

"What are they?" Platonov asked."

Mr. Reavey's work is not inspired or even very distinguished, but it is a sound, honest, competent version. English readers who have not yet made the acquaintance of Gogol are strongly advised to buy it. They will find in the translation and in Mr. Reavey's useful prefatory essay an excellent introduction to the work of that astonishing genius.

V. DE S. PINTO.

Russian Agriculture—from Page 25

satisfactory shelter belt cannot be produced with a rainfall of less than 15 inches a year.

A great deal of propaganda has been associated with the launching of this plan, and it is difficult to make an objective estimation of the prospects for its successful fulfilment. When one is dealing with 300,000,000 acres most other figures will run into millions, and the total effect of the figures is impressive. They do not however tell much. Indeed, the figures for ponds and reservoirs to be built, and for the areas to be irrigated and

afforested under the Stalin Plan are only a fraction of the corresponding figures for what has actually been done in the last two decades in the United States which still suffers from drought and soil erosion. Nevertheless, something is almost bound to come out of the plan, and in view of the immense amount of attention now being given throughout the world to ley farming as a basis of permanent agriculture, the unfolding of the Stalin Plan will be followed with interest.

S.C.R. ACTIVITIES

Reports from all Sections

AS we go to press, the Society is finishing another season of full and varied activity, and preparing for the celebration of its 25th anniversary. Preliminary details of these celebrations will be found elsewhere in this issue, but their significance can only be appreciated against the background of those historic twenty-five years and in conjunction with the present many-sided development of the Society's work.

ARCHITECTURE GROUP. Bulletin No. 21 is now available, covering recent articles in the Soviet architectural Press on technical subjects as well as papers on the problems of aesthetics. Several batches of material have been forwarded in answer to the request of the V.O.K.S. Architecture Section for information about contemporary British domestic architecture.

CHESS SECTION. Bulletin No. 18, dealing with the Moscow-Budapest Tournament, and Bulletin No. 19, dealing with the Women's Championship of the U.S.S.R., have been issued to members. Spare copies are available at 1s. to non-members of the Section. Supplies are also still available of the book on the Anglo-Soviet over-the-board match of 1947, edited by William Winter (who also edits the Bulletins referred to above), and with annotations by Grandmaster G. M. Levenfish (price 5s., post 6d.).

EDUCATION SECTION. The Section is preparing an exhibition on British education for transmission to the U.S.S.R., as one means of answering the many questions about British education which reach it from Soviet educationists. The S.C.R. would be grateful to hear from schools of all types which would be willing to co-operate in the collection of material, such as examples of children's work, copies of time-tables, syllabuses and examination papers, descriptions, photographs and models of school buildings, school uniforms and activities, and indeed any material, descriptive or visual, which would help to give a picture of a school at work. It is proposed to begin the collection of the material during the autumn term of 1949, and to assemble it in the spring of 1950. Offers of assistance and suggestions will be gladly received by the Secretary, Education Section, Society for Cultural Relations with the U.S.S.R., 14, Kensington Square, London, W.8., who will be pleased to give further information.

FILM SECTION. A viewing of "The Young Guard" was held for members and guests on June 29th at 18, Kensington Palace Gardens, by courtesy of the Soviet Embassy. As with previous viewings, the audience was invited to submit their opinion of the film for the benefit of their Soviet colleagues. Stills and descriptive material on a number of British films have been collected for the benefit of the V.O.K.S. Film Section, and negotiations are in progress to forward a number of current British films.

LIBRARY. Additions to the series of abstracts and summaries from current Soviet discussions on aesthetics include the 12th Plenary Session of the Union of Soviet Writers (2s. 6d.—members 1s. 6d.), the Plenary Session of the Board of the Union of Soviet Composers in December, 1948 (2s. and 1s. 6d.), and a summary of the discussions on the graphic arts appearing in the Soviet Press (2s. 6d. and 1s. 6d.).

MUSIC COMMITTEE. At the request of the Writers' Group a concert was arranged on June 13th in honour of the 150th anniversary of Pushkin's birth. Tatiana Makushina sang lyrics by Pushkin in various settings, accompanied by John Wills; and Leonard Cassini (pianoforte) played works by Kabalevsky and Khachaturian. It is hoped during the autumn to constitute a full S.C.R. Music Section and the Honorary Secretary, Mrs. M. Phillips will be pleased to receive the names of members who are interested.

A discussion on "Problems of Soviet Musical Theory" was held on June 9th, led by Alan Bush and Scott Goddard, with Prof. L. S. Penrose in the chair. It attracted a large attendance and many contributions from the floor.

SCIENCE SECTION. Preparations continue for the celebration in the autumn of the centenary of Academician Ivan Pavlov's birth. Plans include showings of the recent Soviet biographical film on Pavlov, papers on Soviet developments based on Pavlov's work, in neurology and psychiatry, and a lecture by Mr. J. G. Crowther on Pavlov's place in the history of science. We regret that in the last issue of the *Anglo-Soviet Journal* the name of Mr. G. C. Grindley was given in error as a member of the Centenary Committee.

THEATRE SECTION. The Section is at present engaged on preparing one-act plays by Pushkin for presentation in the S.C.R. Music Room.

WRITERS' GROUP. There was an excellent attendance at all the functions

arranged during June in honour of the 150th anniversary of Pushkin's birth. In addition to the concert on June 13th, a dinner was held at the Dorchester on June 16th, at which Prof. C. L. Wrenn presided, and the guests of honour included the Soviet Charge d'Affaires (in the absence of the Ambassador abroad), the Polish Ambassador, the Roumanian Minister, Mr. Desmond MacCarthy, Mr. C. Day Lewis and Mr. Rex Warner. On June 21st Mr. Henry Gifford gave a paper on Pushkin's poetry, illustrated by readings in English by Mark Dignam, and in Russian by M. Gorshenov and M. Romanov. On June 28th Mr. David Magarshack gave a paper on Pushkin's prose works. Members attending the Russian conversation evening on July 8th heard a lecture in Russian by Mrs. N. Wissotsky on "Pushkin as a Citizen." The exhibition on Pushkin's life, work and influence, kindly sent by V.O.K.S., was on view in the Music Room during the period of the lectures, and will be visiting the Russian Departments of a number of universities during the autumn.

EXHIBITION DEPARTMENT.

In addition to arranging the Pushkin exhibition, the Department has also circulated the reproductions of Russian XVIIIth and XIXth century art, which was shown at Hanley Art Gallery in June, and that on Architecture of the U.S.S.R., which was displayed at Wolverhampton Art Gallery during July and August. Smaller selections of photographs, charts and other visual aids are still in demand from schools, youth organisations and training colleges, to illustrate a wide variety of subjects. For instance, material on children's theatres and puppet theatres was used for teacher-training at Brighton College of Arts and Crafts; a number of secondary schools have taken portions of the exhibitions on "Education and Character Building," and "The History of Russia in Pictures"; and a general display on life in the U.S.S.R. was provided for the Methodist Youth Conference in London.

SUMMER SCHOOL. The S.C.R. Summer School, arrangements for which

were made by the Education Section, was held at the Hotel Armoric, Tregastel, Brittany, from August 14th to 23rd, 40 members and friends attended, and many more wished to attend but accommodation was not available.

The object of the School was to combine a holiday in pleasant surroundings and congenial company with the opportunity to acquire information and exchange views about the U.S.S.R. From letters already received, it is clear that this object was attained, and many of the visitors comment that it was one of the most enjoyable holidays they have ever spent. This happy outcome was the result of a unique combination of interesting lectures and discussions, the beauty of Tregastel, delightful weather, an excellent hotel, and, not least, the co-operation of the visitors.

Many professions and occupations were represented (music, science, the home, literature, business, teaching, and industry) which provided a wide field of interests. One of the most valuable features of the School was the opportunity it afforded visitors living in country districts of Britain to obtain first-hand information about the U.S.S.R., and through discussion, to reach a fuller understanding of that country's current problems and the solutions adopted. A particularly successful event was a discussion on the recent Soviet controversies in the arts: three visitors prepared short opening papers, which stimulated a large number of contributions from the floor and helped many to a better appreciation of the questions at issue.

The fixed programme consisted of lectures on five mornings, and the discussion mentioned above on the sixth. As is usual the informal discussion that arose directly or indirectly out of the lectures contributed greatly to the clearing away of confusion and misconception. The two whole day and two half-day excursions to places of interest were greatly enjoyed. The consensus of opinion of members of the School was that future Summer Schools should follow the pattern of the 1949 one for allocation of time between fixed lectures and free time.

GALINA ULANOVA AS JULIET IN THE BALLET

"Romeo and Juliet"

By Oleg Leonidov

GALINA ULANOVA was first introduced to the ballet in early childhood, at the Petersburg Marinsky Theatre, that unsurpassed Academy of Choreography. The classic dance took complete hold of the child's imagination and became part of her inner self.

Together with her friends she repeated scenes from "Swan Lake" and "Giselle"; from the "Nutcracker Ballet" and from "The Corsair" without ever dreaming that she herself would some day dance these roles in public, and that her ballet shoes would touch the glorious stages of the finest Russian ballet theatres.

Galina Ulanova comes from a family of ballet dancers. Her mother, Maria Romanova, was a soloist at the St. Petersburg Ballet, and a dancing teacher; her father, Sergei Ulanova, was a balletmaster. She inherited her parents' talent for dancing, that remarkable ability to express emotion in the language of ballet.

In 1928 Ulanova finished the Leningrad School of Choreography where she studied under the well-known teacher Agrippina Vaganova, many of whose pupils are gems of the Soviet ballet.

At her very first performance at graduation exercises, in "Chopiniana" and "The Nutcracker Ballet," the young dancer won the Leningrad public. It was not only the airy grace and superb execution that impressed them. Far more striking was the harmonious combination of perfection and extraordinary range of expression. Ulanova's debut showed that she was not only a remarkable dancer but also a fine actress. She brought ideas as well as emotions to the ballet. And that is, beyond doubt, the distinctive feature of the young Soviet school of ballet, whose tasks are far greater than those of the old ballet. While retaining all of its beauty and grace, in the Soviet Union ballet has acquired new qualities which belong to every kind of realistic art. In interpreting classical ballet producers try to depict the story and at the same time to reveal its psychological motives. More and more often new ballet librettos are written after the finest works of Russian and world literature. Thus, ballets have been written on poems by the great Pushkin, "The Fountain of Bakhchissarai," "The Prisoner of the Caucasus," "The Lady Peasant," "Gogol's Taras Bulba," and

Balzac's "Lost Illusions," have been translated into the language of dance; a ballet has been written on Shakespeare's tragedy, "Romeo and Juliet," music by Sergei Prokofieff.

Galina Ulanova was the first ballet dancer to dance the part of Juliet. Her performance was not only her own success, it may justly be considered one of the finest achievements of all modern choreography. The part, as danced by Ulanova, charms one by its poetry and depth. In the course of the performance the actress changes from the naive, romping girl into a woman whose heart is aflame with love. Her love burns more brightly and fills her whole life, becoming a grand passion. Her Juliet is sincere, truthful, and full of deep feeling.

THE first scene. Ulanova appears as Juliet, a girl swiftly gliding across the stage, her impressions of the world around full of childish naivety. Life is wonderful, but what life is she does not yet know.

To her life still means the sun, laughter, joy, fun, jokes, and the strain of guitars and mandolins. Juliet feels absolutely care-free in the colourful crowd dancing in the street. She has no knowledge of the enmity between the two houses of Verona, the Montagues, and the Capulets, enmity which will shatter her happiness, darken her brow and take away her right to love and be loved.

Then comes the meeting with Romeo. Juliet in Ulanova's interpretation is all excited by the strange and incomprehensible attraction to him. There is surprise and alarm in her dilated eyes and then again something childish, naive and pure flashes in them. But she jumps aside immediately and her face expresses alarm again. The excitement caused by this chance meeting, the sensation of something very big, profound and unknown all are expressed.

The betrothal scene. Ulanova dances it with lyricism and trepidation. There is airy grace, deep emotion, and purity in every movement. The new rhythm of her movements is accompanied by a new expression in her eyes and face, a new liveness in her gestures in the scene with Romeo in the Capulet home.

Ulanova dances the scene before taking the sleeping potion in another rhythm and tempo, revealing new psychological traits of the heroine.

It is splendid actress acts while dancing and dances while acting. Ulanova's acting and dancing is concentrated and self-oblivious; she is one with her heroine. She does not seem to be dancing for the public at all. She is dancing for herself, oblivious to all around her, so full of emotion and so perfect that the spectator feels with Juliet everything she lived through in the brief hours of her tragic love.

The elements of poetical inspiration are evident without words in Ulanova's acting. And involuntarily we are gripped by the feelings we had when we first read Shakespeare's tragedy in our youth, when we first read aloud its concluding words:—

"For never was a story of more woe
Than this of Juliet and her Romeo."

We have seen and heard Juliet so often, interpreted by so many actresses. Yet in this performance by Ulanova, without even hearing Juliet's words, we feel their true depth more than ever.

A multitude of newspaper and magazine articles have been written about Ulanova's

interpretation of Juliet. The critic, Vladimir Golubov, has written a book about Galina Ulanova's dancing for which he received his Master's Degree in Art.

This year the 20th anniversary of Ulanova's career on the stage will be celebrated. In the course of twenty years she has created a whole gallery of roles in classic and modern ballet. Every performance with Ulanova is a choreographic triumph.

Galina Ulanova is one of very few actresses in the U.S.S.R. who have been awarded a Stalin Prize three times—the first time for outstanding achievements in ballet, and then for her performances in "Romeo and Juliet," and "Cinderella." The title of People's Artist of the R.S.F.S.R. has been conferred on Ulanova and also the title of People's Artist of the Kazakh Republic for her performances in Kazakhstan during the war.

The ballet dancer is at the height of her creative powers. We shall have the opportunity of admiring Galina Ulanova's brilliant dancing and fine acting many times.

Changing Attitudes in Soviet Russia : The Family :

RUDOLPH SCHLESINGER

Soviet Russia has greatly modified her attitude to many of the fundamental problems of life since the Revolution. In this volume, Professor Schlesinger shows how these changes have worked out in the sphere of family life. His book comprises mainly quotations from the actual documents, his own part being confined to introductions and explanatory notes.

25s. net.

ROUTLEDGE & KEGAN PAUL

Anton Simeonovitch Makarenko : Russian Teacher

W. L. GOODMAN

The story of the rescue and rehabilitation of the bands of lawless children thrown up by the Russian revolution. Makarenko was a pioneer in this work, and his methods and personality are of exceptional interest.

8s. 6d. net

ROUTLEDGE & KEGAN PAUL

NOTES AND NEWS

Education

New Minister. Ivan Kairov has been appointed Minister of Education of the R.S.F.S.R. in place of Alexander Vosnesensky.

The New Educational Year. There are over 220,000 primary, 7-year and secondary schools with 34 million pupils. In the R.S.F.S.R. over 25,000 graduated from the pedagogical and teachers' training institutes.

More Teachers will be trained in the 30 new institutes for secondary teachers. An agricultural institute was opened in Ryazan. New faculties and departments are being opened in the forthcoming academic year at the Mogilev, Gomel and Yakutsk teachers' training institutes. The Herten teachers' training institute in Leningrad has set up a new department for the Peoples of the North. New Physical Culture Departments have been set up at six pedagogical institutes; 13 new schools for sport instructors have been opened. Teachers who have completed 25 years' work will receive an additional 40 per cent. for long service, to their salary.

Text Books. In the year 1949-50 over 90 million text books will be printed in the native languages of the Tatar, Bashkir, Buryat Mongolian, Yakut and others. Altogether over 174 million text-books are to be published in this school year.

North Ossetia now has 262 schools, 14 pedagogic, mining, iron and steel, and agricultural technical schools, four theatres, and 30 cultural-educational institutions.

North Siberia. In the northern area 26,000 children are attending school. In the Khant-Mansiisk and Yamalo-Netets national districts there are 336 schools to which 55 graduate teachers are being sent; 39 teachers have arrived in the tundra schools of the far distant Yamal Peninsula. For the first time six young Khant and Mansi graduates from the Northern People's Faculty of Leningrad University, will work in their native land.

Sakhalin has 600 schools, 6 technical institutes, 200 clubs, 55 libraries and more than 400 medical institutions and kindergartens.

Moscow higher educational establishments enrolled 27,000 students in September.

Adult Education

Societies for the Dissemination of Political and Scientific Knowledge function in 15 Union Republics, comprising 165 branches and 195 departments. In 1948 members of the Society delivered over 82,000 lectures—over 10,000 in collective farms and rural localities. The Society publishes pamphlets; has issued 380 titles in a total edition of

over 19 million copies.

Since the war collective farms in Soviet Azerbaidjan have built 760 clubhouses and libraries and 283 schools.

Cultural and educational work is carried on from mobile tundra clubs for the nomadic population of the Yamal-Netets National Region.

Political and scientific education is carried on in collective farm universities of which there are 44 in the Poltava Region in the Ukraine. They are attended by leading collective farm workers for six hours a week.

On the initiative, and with the direct assistance of the local people themselves, the collective farms of the Kursk Region built and equipped about 300 clubs. Similar activity goes on in the Trans-Carpathian-Region, and Daghestan A.S.S.R., in the villages of Soviet Azerbaidjan and many outlying parts of the Soviet Union.

Lithuania has opened 2,780 clubs and reading rooms and 2,300 mobile libraries were set up in 1949.

The Coal Industry is erecting 118 clubs for miners, 48 to be ready this year. The miners' cultural facilities at present comprise 29 Palaces of Culture, about 600 clubs, and 2,400 Red Corners at the mines and pits. The existing 600 libraries are to have 23 more added.

Science

Geophysical Laboratory. The restoration has been completed of the oldest scientific research institution of the Ukraine, the Kiev Geophysical Observatory, which is 95 years old. Departments have been set up to study agro-meteorology, atmospheric electricity and actinometry. An extensive study is being conducted on climatic regime, and distribution of precipitation throughout the Ukraine.

Astronomy Publications. The Institute of Theoretical Astronomy of the U.S.S.R. Academy of Sciences has published a collection of works devoted to the ephemerides of 1,217 small planets. An annual journal of astronomy for 1951 was published in August giving two maps of the total solar eclipse to take place on September 12th, 1950. A revised annual naval astronomical journal is also published.

Botanical Gardens. The largest botanical gardens in Central Asia are to be laid out by the Uzbek Academy of Science on the outskirts of Tashkent. There is already a collection of 900 plant specimens from Central Asia. The gardens will serve as a scientific and research and educational institution.

The Geographical Society of the U.S.S.R. now has over 500 branches. Chelyabinsk geographers have prepared information on the mineral deposits. Archangel geographers have completed a collective work on the economic-geography of the Region. During the year members of the Society gave over 700 popular scientific lectures.

Academician V. A. Obruchev, world-famous geologist, in his 86th year, who has written over 500 papers, treatises, &c., still pursues his scientific work and in his spare time continues his hobby, writing scientific adventure stories for young people. Two of his most popular stories, "Plutonia" and "The Land of the Sannikovs," have just been re-published in a revised edition. Last year in addition to revising these two books he published two new ones. Now he has started on another story, "Gold-seeker in the Wilderness," and is considering writing his memoirs.

Archaeology

Activity in R.S.F.S.R. Eighty-five archaeological expeditions are working this year in the Russian Federation. Researches in Staraya Ladoga will throw light on the origin of the ancient Slav tribes which came to the North from the South and brought with them a highly developed agriculture.

A Tauro-Scythian expedition is conducting excavations in the mountainous districts of the Crimea. The findings confirm that the Scythians who inhabited this area and created a high urban culture were the ancient forebears of the Southern Slavs. Excavation of mounds containing relics dating back to the 6th and 7th centuries B.C. are being conducted in Altai.

In the Ukraine thirty-one expeditions are at work. One concerned with the origin of Kiev has found valuable materials relating to the Neolithic Age (6,000 to 7,000 years B.C.) on the outskirts of the city. The finds include flint tools as well as fragments of pottery, vessels and money.

Ancient Town. An archaeological expedition of the Marr Institute and of the Pushkin Fine Arts Museum carrying out excavations in the suburbs of Fedosia has discovered the site of an ancient big town. Digging showed a tiled floor of hexagonal bricks, remnants of a water pipe, copper coins and bones of animals.

Medicine

Transplanting Cornea. On August 7th Academician V. P. Filatov performed his 1,000th operation of transplanting the cornea.

Painless Childbirth. As there now exist in the U.S.S.R. suitable and tested anaesthetics, the U.S.S.R. Ministry of Public Health has proposed that painless birth is to be used where this is demanded by

expectant mothers if their health permits it. A large number of midwives are to be trained at special courses for this.

Agriculture

Collective Farms. By August, 1949, there were 5,800 collective farms in the Western and Transcarpathian regions of the Ukraine, comprising over 55 per cent. of all peasant households; 229 machine and tractor stations operate in the regions. Over 4,000 collective farms have already been set up in Lithuania.

Stock-raising. The Germans slaughtered and drove off from the Ukraine to Germany 94 per cent. of the beef and dairy cattle, 98 per cent. of the hogs and 96.5 per cent. of the sheep. Now every collective farm has three stock-raising, and one or two poultry, farms. All Ukrainian collective farms have exceeded the State plan for the development of beef and dairy cattle, horses and sheep. In one year the head of beef and dairy cattle increased by more than 43 per cent., sheep by 44 per cent., hogs—2.3 times, and poultry was doubled.

Moving North. Leningrad scientists have acclimatised over 150 southern plants which include "Kazan buckwheat," "branched" wheat, varieties of cherries and 20 varieties of strawberries.

Afforestation. About 262,000 acres of afforestation belts have been laid out this year by Ukrainian collective and State farms. The plan set for the year 1949 has been considerably exceeded.

Irrigation. A big irrigation network is being set up in Georgia, with canals totalling about 375 miles in length.

Artificial Rain Machine. Testing has been completed of a new artificial rain installation. The apparatus is also adapted for spraying mineral fertiliser in liquid form, is run by electricity, and needs one person to operate.

Electrification. By the beginning of 1949, 24,000 collective farms were running on electricity and using 56,000 electric motors. Large power stations are coming into use, a 10,000 k.w. hydro-electric station was finished in 1948 and a 20,000 k.w. station is nearing completion with the aid of 36 collective farms. Electric power saved collective farms 98,000,000 man-day units in 1948.

Twenty-nine rural hydro-electric power stations have been built during the past six months, supplying electricity to 859 collective farms. Thirty districts of the Moscow region have been electrified. 4,647 collective farms have electricity. Some 210,000 collective farmers' homes and very many cultural and other establishments have electric light, over 4,000 threshing stations and a large number of stock-raising farms, flour mills, &c., are using electric power. Electric refrigerators and irons and other

appliances have appeared in peasant homes. The collective farmers of the Moscow Region have undertaken to build before the end of the year over 100 new power stations to serve a further 1,700 collective farms. Moscow's factories and mills are sending workers and experts to the villages as well as providing equipment and materials.

Electric Harvester Combine, claimed to be the first in the world, passed tests at the All-Union Academy of Agriculture in August

Industry

Inventiveness. Over 30,000 inventions and rationalisation proposals were put forward by Soviet oil workers during 1948 and 1949. Nearly 22,000 have already been applied resulting in an increase in oil production.

Soft Wood into Hard Wood. A group of scientific workers have produced a miniature timber rolling mill which converts soft woods into excellent building material, the rolled boards finally being one and a half times as hard as oak. They can be successfully used for furniture as they are easily polished and take on a beautiful walnut shade.

Road Building. To speed up the construction and restoration of roads 137 road-building machinery stations are being set up to assist workers and collective farmers engaged in this work.

Housing

Pre-fabs in Leningrad. The construction of the first post-war five-storey apartment block from pre-fabricated parts has been completed on the Moscow Road, and the last storey of a second similar building is nearing completion. Construction of the third and fourth blocks is proceeding. A new form of inter-storey flooring is being manufactured in sections with sound and heat insulation incorporated. One such section equals 60 square feet of ready-made flooring. All the houses destroyed in Leningrad during the war are now restored. The number of flats supplied with gas has increased 37 times.

For Miners. In the three years of the post-war Five-Year Plan, housing equivalent to 160,000 rooms 15 feet square, was put up in the coal mining regions; 50,000 cottages were built by the miners with Government aid. Kindergartens accommodate 7,000 youngsters. Children's clubs have been set up in the Donetz coal field and in the Urals where thousands of miners' children spent their holidays.

For Engine Drivers. Ten per cent. of the floor space in all houses built by the Ministry of Railways is earmarked for engine drivers, 2,000 will receive new homes this year.

Food

The quantity of milk coming into Leningrad shops has increased by 30 to 40 per cent. The average Leningrader consumed in milk products the equivalent of over 2.6 pints of milk a day. Meat products received by the workers this year is double that of 1948. The Mikoyan meat-packing plant in Moscow puts out 100 different varieties of sausage and salami.

Over a thousand varieties of confectionery are produced by the Food Ministry of the Soviet Union. Production was 38 per cent. more than in the corresponding period in 1948.

Between 1949-1951, 2,200 creameries and cheese factories, 400 factories for dried milk, and 6,000 skimming departments, 15 factories to produce 32 million tins of condensed milk and 8,800 tons of dried milk annually, will be built.

Butter production this year exceeded pre-war by 33 per cent.

In the first half of 1949, 40 per cent. more beer was brewed.

During the first six months of 1949 the Soviet tobacco industry produced 9,000 million cigarettes more than in 1948.

Health

The Ukraine. A quarter of the Ukrainian budget is allocated to the health services, advancement of medical science and to training of doctors. Hospital beds in towns increased by 3,000 since 1940. In the villages all pre-war hospitals have been restored and 420 new ones with 9,000 beds constructed. Over 35,000 doctors are employed.

The network of mother and child welfare centres, creches and nursery schools has been completely restored. This year more than a million children spent a holiday in Sanatoria and Pioneer Camps.

In July, 1949, 5,000 doctors graduated. Over 2,000 will work in rural areas. Every rural district hospital is setting up departments for therapy, surgery, gynaecology, radiology, pediatrics and infectious diseases.

In Factories, the "Hammer and Sickle" agricultural machinery plant has a new health centre providing treatment against colds and bronchial ailments. There is a special room for inhalations, and a room for ultra-violet ray treatment. An electric mud treatment hospital has been opened at the Kharkov Tractor plant which treats 250 people a day; in the lunch hour and evenings. Further factory health centres are under construction at the Kharkov electro-mechanical plant, and "Miner's Light" plant and others.

Sanatoria. A sanatorium for 100 farmers' children was built by the Prunze Collective Farm in Tadzhikistan.

Holidays

Miners. During the first half of this year over 30,000 miners spent their holidays in sanatoria and rest homes, many free. Others paid only one-third of the cost.

Railwaymen. In 17 sanatoria and 23

rest homes belonging to the Central Committee of the Railway Transport Union 100,000 Soviet railwaymen spent their summer holidays. 60,000 railwaymen went to sanatoria and rest homes of the All-Union Central Council of Trade Unions and the U.S.S.R. Ministry of Health.

BOOKS RECEIVED

The inclusion of books in this list does not preclude a detailed review in future issues.

Military and Political Consequences of Atomic Energy.—P. M. S. Blackett. (Turnstile Press Ltd., 12s. 6d.)

Dark Avenues.—Ivan Bunin. Translated Richard Hare. (John Lehmann Ltd., 9s. 6d.)

The Friend of the Family.—F. Dostoevsky. Translated C. Garnett. (Heinemann and Zsolnay Ltd., 8s. 6d.)

Russian and the Slavonic Languages.—W. J. Entwistle and W. A. Morison. (Faber and Faber, 50s.)

The Nazarovs.—Markoosha Fisher. (V. Gollancz Ltd., 12s. 6d.)

Structure Drill in Russian.—V. Jukova and F. G. Brannigan. (Lund Humphries and Co. Ltd., 6s.)

Fienka.—V. Krymov. (George Allen & Unwin Ltd., 12s. 6d.)

Chinese Russian Relations.—Michel N. Pavlovsky. (Philosophical Library, New York, \$3.75.)

Anna Karenin.—Leo Tolstoy. Translated C. Garnett. (W. Heinemann Ltd., 15s.)

The Law of the Soviet State.—A. Y. Vishinsky. Introduction John N. Hazard. Translated Hugh W. Babb. (Macmillan, 75s.)

Slavonic Encyclopaedia. Edited by Joseph Roucek. (Philosophical Library, New York, 75s.)

Soviet Studies.—Basil Blackwell.

Contributions to the Anthropology of the Soviet Union.—Compiled by Henry Field, Washington, 1948.

Giant at the Crossroads.—By Ilin and Segol. (International Publishers).

Stalin. A Political Biography.—By I. Deutscher. (Oxford University Press).

Moscow Correspondent.—By Ralph Parker (Frederick Muller).

The Amazon.—By Nikolai Leskov. Translated by David Magarschack. (Geo. Allen and Unwin).

SPORT—from Page 31

Meshkov visited London with a students' delegation in 1946. He had a number of practice swims at Marshall Street Baths just off Oxford Circus, and the terrific speed he showed then got him headlines in the London evening papers.

But, try as hard as I did, I could not get

our Amateur Swimming Association to arrange a race for Meshkov. They stated that as the U.S.S.R. was not affiliated to the international controlling body for swimming they could not allow British swimmers to compete against swimmers from the Soviet Union!

S.C.R. PUBLICATIONS

"Russian Painting, 1700-1917," by Jack Chen. An historical commentary on the development of painting in Russia, essential to the understanding of the contemporary Soviet school. With 14 illustrations. Price 1s. (postage 2d.) from S.C.R. Exhibition Department.

"Soviet Writers Reply."—Answers by Soviet writers to questions from British writers, with introductions by J. B. Priestley and Konstantin Simonov. Price 2s. (post 2d.) from S.C.R. Writers' Group.

Eisenstein Commemoration.—A souvenir programme in book form, with articles by Paul Rotha, Ivor Montagu, John Grierson, Marie Seton, Herbert Marshall. Fully illustrated by superb stills. Price now 1s. (post 3d.).

Architecture of the U.S.S.R.—A fully illustrated booklet prepared by the Architecture and Planning Group for the recent exhibition at the R.I.B.A., giving historical background and contemporary development. Price 2s. (post 2d.).

Book List on the U.S.S.R.—Prepared by the S.C.R. for the National Book League. Indicates some of the best-known books which have appeared during the period from late 1942 to early 1947, and supplements the previous list published in 1942. Price 10d. post free.

S.C.R. BRANCH REPRESENTATIVES

Aberdeen.—J. A. Findlay, Esq., 72, Cairnfield Place, Aberdeen. **Leeds.**—Dr. A. Kettle, 36, Moor Road, Leeds, 6.

Bradford.—C. C. K. Swithinbank, Esq., 16, Beechwood Grove, Wibsey, Bradford. **Marlborough.**—K. Stiles, Esq., 2, Elmwood Crescent, Marlborough.

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Edinburgh.—Mrs. J. Murray, 16, Rothesay Place, Edinburgh, 3. **Nottingham.**—Prof. V. de S. Pinto, The University, Nottingham.

Glasgow.—S. McCulloch, Esq., 106, Herries Road, Glasgow, S.1. **Oxford.**—Miss G. Thorneycroft, St. Hugh's College, Oxford.

Hull.—R. Buckle, Esq., 14, Hotham Street, Cottingham Road, Hull. **Sheffield.**—Mrs. B. Hunt, 13, The Quadrant, Totley, Sheffield.

York.—W. Coleman, Esq., B.Sc., 50, Monk-gate, York.

SOCIETY FOR CULTURAL RELATIONS
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PAVLOV CENTENARY CELEBRATIONS

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Recent advances in the study of Conditioned Reflexes

Lecture by Dr. A. S. McPherson

Thursday, 6th October, 7-30 p.m. 14, Kensington Square, W.8

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The Application of Conditioned Reflexes to Psychiatry

Lecture by Dr. B. H. Kirman

Thursday, 13th October, 7-30 p.m. 14, Kensington Square, W.8

* * * * *

Pavlov, Scientist and Man : his place in the history of civilisation.

Lecture by J. G. Crowther

Assembly Hall, University of London Institute of Education,
Malet Street, London, W.C.1

Thursday, 3rd November, 7-30 p.m.

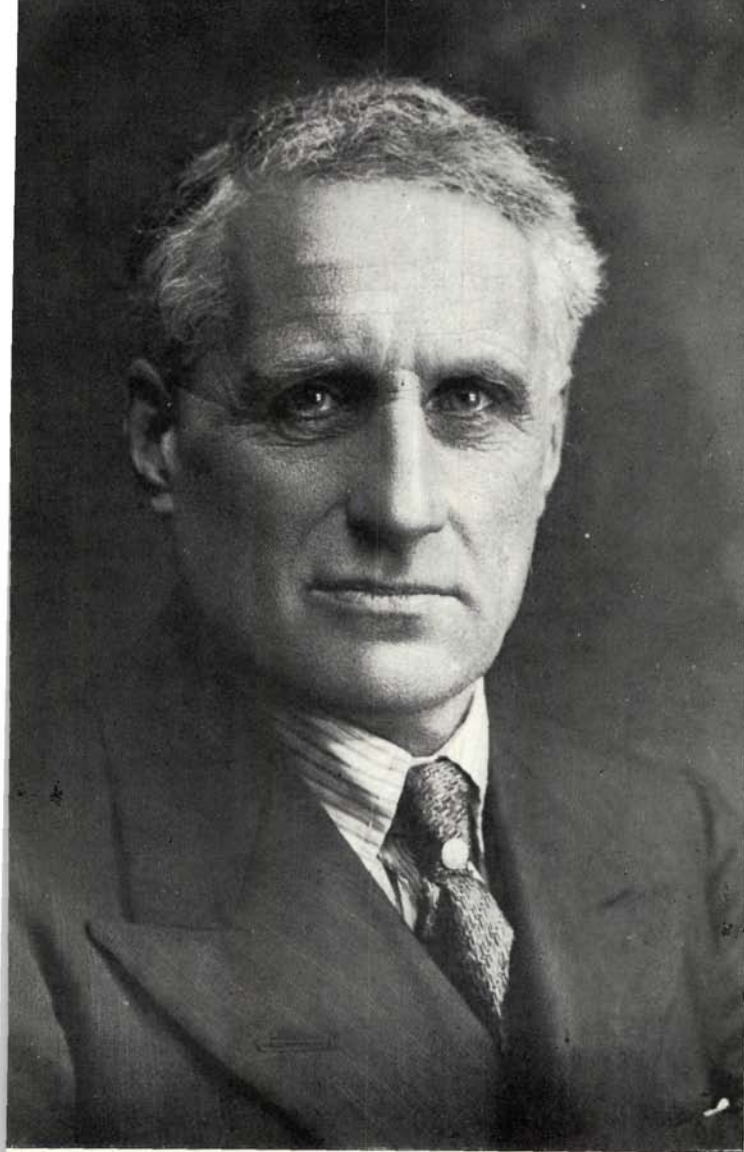
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FILM—"Mechanism of the Brain"—date and place to be announced

* * * * *

FILM—"Academician Pavlov"—date and place to be announced

Series Ticket, 10/- (non-members 12/6) from S.C.R. Science Section,
14, Kensington Square, W.8 (WESTern 1571), Single Tickets (2/6 and
3/-) are available.



*The President
of the S.C.R.,
The Rt. Hon.
Sir Charles
Trevelyan.*



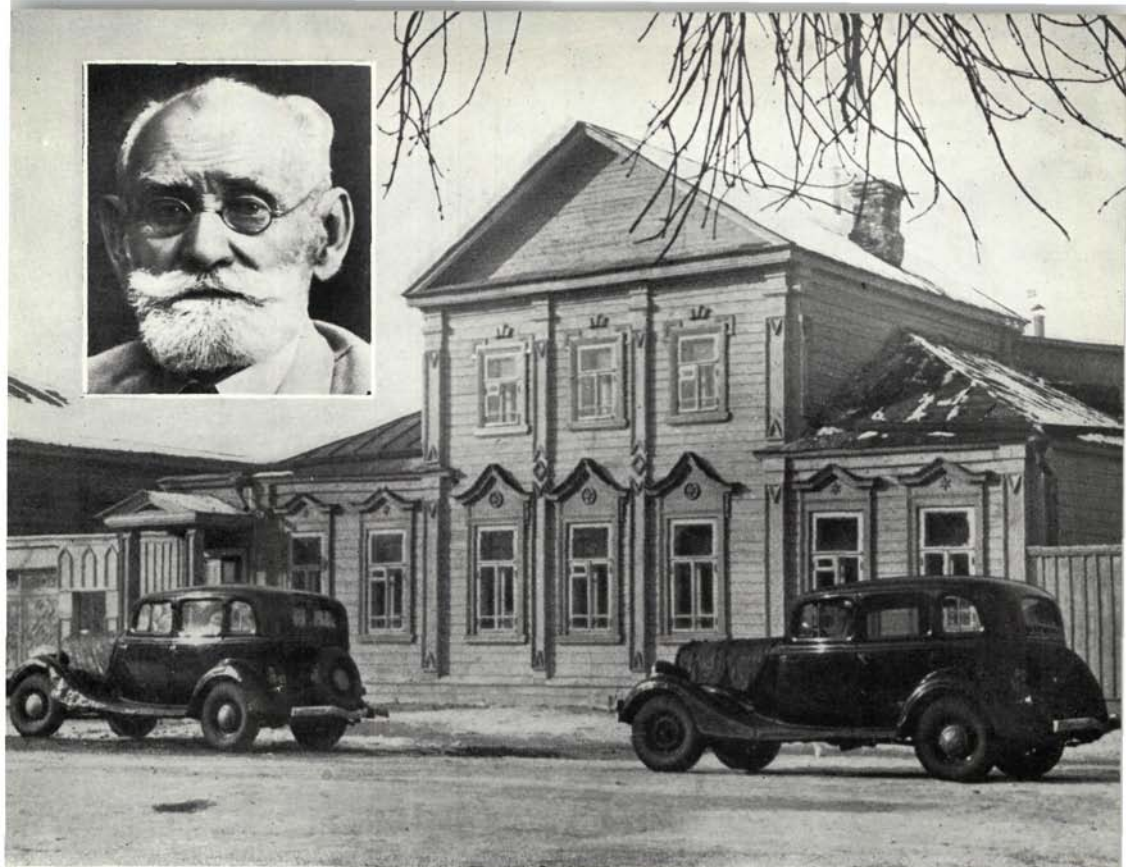


*Oak
seedlings
in the
Shipov Forest
Nursery,
Voronezh
Region.*

*Well-established
shelter-belts
in the
Kamenny steppe,
Voronezh Region*







The house where Pavlov was born, now a Pavlov museum. Inset, I. V. Pavlov.

In the operating theatre. Pavlov and his students.

